U. S. DEPARTMENT OF LABOR
JAMES J. DAVIS, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

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This Issue in Brief

Labor accounts for only 41.8 per cent of the cost of erecting a building, while material accounts for 58.1 per cent, according to a study made in three representative cities by the Bureau of Labor Statistics. This study also shows the proportionate cost of labor and material in each of the major items of erecting a building, and what portion of the building dollar is spent for each class of work.

Material formed a larger percentage of the cost than labor in all the items that make up the cost of residential building, except excavating, painting, papering, and plastering. In nonresidential building only three items—excavating, plastering, and painting—show a higher labor cost than material cost.

Carpenter work takes the largest slice of the building dollar in residential building, 32.7 cents of each dollar going for this class of work. In nonresidential building, concrete work, for which 18.5 cents of each dollar is spent, accounts for the largest single item of expenditure. Page 1.

Although the general conditions of employment stability in the men's clothing industry are bad and have shown no improvement in recent years, a number of establishments have excellent records. Thus, of 64 establishments studied by the Bureau of Labor Statistics, 2 had an average of more than 96 per cent of full-time employment for each of the six years 1923 to 1928, and several establishments show averages of more than 98 per cent in individual years. It would appear, therefore, that there is nothing inherent in the industry itself which necessitates the great employment irregularity which at present characterizes the majority of men's clothing establishments. Page 13.

Full-time weekly earnings in the men's clothing industry were slightly lower in 1928 than in 1926, according to the recent biennial survey by the Bureau of Labor Statistics. The average full-time weekly earnings for males declined over the period from $41.51 to $40.75; and those of females from $24.28 to $23.44. The hours of labor for males in 1928 were 44.1 for a full week as against 44.3 in 1926, and for females were 43.9 in 1928 as against 44.3 in 1926. Page 128.

The weekly earnings of office workers in factories in New York State were $36.37 in October, 1928, as against $19.18 in June, 1914, an increase of about 90 per cent. The information is from a report of the New York Department of Labor, which gives similar data by individual industries. Page 136.

Colonial records dealing with wages and wage legislation suggest that the tradition of "high American wages" is as old as the country. Labor scarcity created a wage scale which was considerably higher than that of European workers, and which colonial legislation fixing a maximum wage tried in vain to control. Page 8.

Accidents in the construction industry have been steadily increasing according to such records as are available. There is need of new building codes, most of the State codes being out of date. The Commissioner of Labor Statistics suggests that now is an appropriate time for calling a council of all the States to review their building laws in consonance with the new methods and types of building. With building contractors engaged more and more in interstate business, the need for a uniform building safety code becomes more and more apparent. Page 63.

Labor unions have developed far beyond their original field of wages, hours, and working conditions. Beginning, generally, with benefits for strikes, death, sickness, etc., unions have steadily widened the scope of their activities. Labor banks are perhaps the best known of the union owned and directed enterprises. Other ventures, less well known, include credit unions, home-loan associations, union-label stores, insurance companies, health services, construction of homes, recreational activities, etc. Labor unions are also taking an interest in the conditions in industry and in broad social and economic problems. Page 26.

The existing legal restrictions upon the hours of labor of men, and the attitude of the Supreme Court toward such legislation, is reviewed in an article beginning on page 16. In general, it appears that the Supreme Court in recent years has upheld the right of the State to place reasonable restrictions upon the number of hours per day which adult males may work.

Labor turnover in American factories was lower in the first half of 1928 than in the corresponding period of 1927. Beginning with July, 1928, however, both accession and quit rates have been higher month by month than in the corresponding months of 1927. It is also noteworthy that this year, for the first time since 1922, the October accession rate exceeded that of September. This upward movement of turnover rates indicates a growing industrial activity. Page 41.

Output per worker in the major American industries increased 34.5 per cent between 1918–1920 and 1926–27, according to compilations made by the Department of Commerce. The increase for agriculture over this period is estimated at 27 per cent; for mining, 38 per cent; for manufacture, 43 per cent; and for rail transportation, 12 per cent. Page 54.

Journalists are well organized in a number of foreign countries, especially in Austria, Germany, Great Britain, and Italy. The collective agreements signed with publishers cover such matters as hours of labor, vacations with pay, settlement of disputes, and right of discharge. Page 45.

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Relative Cost of Material and Labor in Building Construction

A STUDY of the relative cost of material and labor, and of the relative cost of each class of work in the building industry has just been completed by the Bureau of Labor Statistics. As the number of cities covered was necessarily limited, the cities of Washington, D. C., Cincinnati, Ohio, and Decatur, Ill., were selected as being fairly representative of the different types of urban communities. The data relate to the early part of 1928.

It is to be emphasized, however, that the totals shown in the tables below are totals of the three cities only, and should not be interpreted as applying to the United States as a whole.

Representative contractors in these three cities furnished to agents of the bureau data as to the amounts spent for materials and labor for each of the different parts of the building on which they did the work themselves, and also as to the amounts of the subcontracts and the subcontractors to whom let. The subcontractors in turn reported the amount spent for labor and material on that part of the building on which they worked.

The cost figures stated in the present article are the net cost figures, representing only the actual cost of the building from the time excavation started. They do not include overhead expenses, profits, cost of land, or finance charges.

The cost of the material is its actual cost as delivered to the job, including freight and hauling. The labor costs are costs of labor on the job, and do not include any shop labor such as the making up of millwork or the cutting of stone at the quarries.

The buildings selected for the study were chosen from the types usually built in the city and the number selected from each type was roughly in proportion to the number built in the city.

Relative Cost of Material and Labor in New Buildings

TABLE 1 shows the percentage of labor and material cost in the construction of residential and nonresidential buildings in each of the three cities from which data were obtained and the weighted total of all buildings in each of these cities and for the three combined.

TABLE 1.—PER CENT OF COST OF CONSTRUCTION OF BUILDINGS CHARGEABLE TO LABOR AND MATERIALS IN 3 SPECIFIED CITIES

Type of building	Cincinnati, Ohio		Decatur, Ill.		Washington, D. C.		Total	
	Material	Labor	Material	Labor	Material	Labor	Material	Labor
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Residential	55.6	44.4	62.8	37.2	52.6	47.4	54.0	46.0
Nonresidential	62.4	37.6	61.0	39.0	59.3	40.7	61.7	38.3
Weighted total	60.2	39.8	61.3	38.7	54.3	45.7	58.1	41.8

In the three cities taken as a whole, material accounted for 54 per cent of the total cost of residential building and 61.7 per cent of nonresidential building, while labor accounted for 46 per cent of the cost of residential building and 38.3 per cent of the cost of nonresidential building. If we weight each class of building by the proportion it formed of all building in the year 1927 we find that of the total cost of all building 58.1 per cent is for material and 41.8 per cent is for labor.

It was found that the proportion of costs did not differ greatly in the different cities, but as regards the individual buildings for which data were obtained there was a moderate range in the proportion of material to labor. In Cincinnati the lowest material cost on any one residential building was 48.4 per cent and the highest 56.9 per cent, while the lowest labor cost was 43.1 per cent and the highest 51.6 per cent. In Decatur the range of material cost of residential buildings was from 60.7 to 66.1 per cent and of labor 33.9 to 39.3 per cent. In Washington the cost of material formed 49.7 per cent of the cost of the residential building where material cost was lowest and 56 per cent of the cost of the one where the material cost was highest.

Of nonresidential buildings in Cincinnati the building where material formed the highest portion of the total cost showed a ratio of material to labor of 65.1 to 34.9 per cent. On the building where labor formed the highest proportion of the total cost labor was only 46.6 per cent of the total cost, and material 53.4 per cent. In Decatur the difference in the proportion of material to labor in nonresidential buildings ranged from 56.4 per cent for material and 43.6 per cent for labor, to 65.3 per cent for material and 34.7 per cent for labor. In Washington this range was from 55.2 per cent for material and 44.8 per cent for labor to 61 per cent for material and 39 per cent for labor.

It was impossible to determine whether this range in material and labor cost is caused by more efficient labor on one building than on another or whether more costly materials were used in the construction of some buildings than others.

Relative Material and Labor Costs in Each Item of Building

TABLE 2 shows the percentage of material cost and labor cost of the different items in the erection of residential buildings in each of the cities from which data were received and in the three cities combined.

TABLE 2.—PER CENT OF SPECIFIED CLASS OF CONSTRUCTION WORK CHARGEABLE TO LABOR AND MATERIAL IN THREE SPECIFIED CITIES—RESIDENTIAL BUILDINGS

Class of work	Cincinnati		Decatur		Washington		Total	
	Material	Labor	Material	Labor	Material	Labor	Material	Labor
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Excavating and grading	10.0	90.0	----	100.0	----	100.0	4.3	95.7
Brick work	54.6	45.4	45.9	54.1	52.8	47.2	53.2	46.8
Carpenter work (builders' hardware, lumber, and millwork)	58.6	41.4	69.3	30.7	54.5	45.5	56.5	43.5
Tile work	52.8	47.2	61.8	38.2	57.7	42.3	55.2	44.8
Concrete work	43.4	56.6	65.6	34.4	58.8	41.2	51.9	48.1
Electric wiring and fixtures	61.7	38.3	72.0	28.0	68.9	31.1	65.5	34.5
Plumbing	68.9	31.1	77.9	22.1	60.8	39.2	64.8	35.2
Heating	71.0	29.0	78.5	21.5	72.8	27.2	72.2	27.8
Painting	40.3	59.7	49.4	50.6	25.3	74.7	33.4	66.6
Papering	22.3	77.7	31.5	68.5	33.2	66.8	26.6	73.4
Plastering	45.8	54.2	45.0	55.0	37.8	62.2	38.3	61.7
Roofing	48.4	51.6	67.8	32.2	56.4	43.6	54.8	45.2
Miscellaneous	87.2	12.8	95.8	4.2	63.0	37.0	74.8	25.2

Considering the three cities as a whole, material formed a larger percentage of the cost than labor in all the items that make up the cost of residential building, except excavating, painting, papering, and plastering. In Cincinnati the labor cost was higher than the material cost in these four items and also in concrete work and roofing. In Decatur brick work as well as excavating, painting, papering and plastering showed a higher labor cost than material cost. In Washington only in the four last-named classes of work was the labor cost more that half the total cost.

Disregarding the cost of miscellaneous items, the installation of the heating plant showed the highest material and lowest labor percentage of any of the items that go to make up the cost of erection of residential buildings; in the three cities combined, 72.2 per cent was spent for material and 27.8 per cent for labor on this class of work. On the other hand, practically the whole cost of excavating is chargeable to labor. The highest labor percentage in any item of the building itself was for papering—77.7 per cent in Cincinnati and 68.5 per cent in Decatur. In Washington the cost of labor was a larger percentage of the cost of painting than of papering; the labor cost formed 74.7 per cent in painting and only 66.8 per cent in papering.

In carpenter work, which is the largest item in the cost of residential building, the ratio of material cost to labor cost was 54.5 to 45.5 in Washington, and 69.3 to 30.7 in Decatur. In the cities taken as a whole, the ratio of the cost of material to the cost of labor in this item was 56.5 to 43.5.

In plumbing, and in electric wiring and fixtures over 60 per cent of the cost was for material in each of the cities.

Table 3 shows the percentage of labor cost and of material cost in each of the different items in the erection of nonresidentialbuil dings.

TABLE 3.—PER CENT OF COST OF SPECIFIED CLASS OF CONSTRUCTION WORK CHARGEABLE TO LABOR AND MATERIAL IN THREE CITIES—NONRESIDENTIAL BUILDINGS

Class of work	Cincinnati		Decatur		Washington		Total	
	Material	Labor	Material	Labor	Material	Labor	Material	Labor
	P. ct.	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
Excavating and grading	11.6	88.4	.....	100.0	1.9	98.1	7.4	92.6
Brick work	57.4	42.6	59.3	40.7	58.6	41.4	57.9	42.1
Carpenter work (builders' hardware, lumber, and millwork)	74.9	25.1	62.2	37.8	50.5	49.5	68.7	31.3
Tile work	69.5	30.5	40.7	59.3	73.7	26.3	69.9	30.1
Concrete work	49.1	50.9	58.4	41.6	55.9	44.1	51.5	48.5
Structural steel	49.2	50.8	79.9	20.1	76.9	23.1	56.7	43.3
Electric wiring and fixtures	61.7	38.3	63.1	36.9	68.6	31.4	62.9	37.1
Heating and ventilating	67.7	32.3	78.8	21.2	72.8	27.2	69.4	30.6
Plumbing	74.5	25.5	74.3	25.7	59.6	40.4	72.5	27.5
Plastering	48.3	51.7	36.6	63.4	29.1	70.9	45.1	54.9
Painting	32.6	67.4	32.9	67.1	30.9	69.1	32.3	67.7
Roofing	68.0	32.0	74.8	25.2	49.0	51.0	64.2	35.8
Glass and glazing	82.0	18.0	57.3	42.7	91.7	8.3	80.1	19.9
Miscellaneous	84.4	15.6	73.5	26.5	75.0	25.0	83.0	17.0

In the erection of nonresidential buildings, when the three cities are considered as a whole, only three items, excavating, plastering, and painting, show a higher labor cost than material cost. In constructing nonresidential buildings in these cities 67.7 per cent of the cost of painting is due to labor and 32.3 per cent to material, while 92.6 per cent of the excavating cost and 54.9 per cent of the plastering cost is for labor.

The proportionate cost of materials in the remaining classes of work ranges from 51.5 per cent in concrete work to 80.1 per cent in glass and glazing, and 83 per cent in the miscellaneous operations.

Excluding excavating and "miscellaneous," the highest proportion of material costs shown in Cincinnati was for glass and glazing, and the highest proportion of labor cost was for painting; in Decatur the highest percentage of material cost was for structural steel, and the highest percentage of labor cost was for painting; while in Washington glass and glazing showed the highest percentage of material cost, and plastering showed the highest percentage of labor cost.

How the Building Dollar Goes

TABLE 4 shows the percentage that the cost of each process in building forms of the total cost of residential building in each of the cities and for all three combined. These figures include both labor and materials.

TABLE 4.—PERCENTAGE THAT COST OF EACH CLASS OF WORK FORMS OF TOTAL COST OF RESIDENTIAL BUILDINGS IN THREE CITIES

Class of work	Per cent of total cost chargeable to specified class of work in—			
	Cincinnati, Ohio	Decatur, Ill.	Washington, D. C.	Total
Excavating and grading	2.3	2.0	1.9	2.0
Brick work	12.7	11.8	18.4	16.1
Carpenter work	31.4	45.0	33.0	32.7
Tile work	2.8	1.0	1.6	2.1
Concrete work	11.3	7.1	8.4	9.5
Electric wiring and fixtures	3.6	2.5	2.3	2.8
Heating	5.6	6.4	5.3	5.5
Plumbing	11.0	7.8	8.3	9.3
Plastering and lathing	9.0	5.9	8.4	8.6
Painting	2.8	5.5	5.4	4.4
Papering	.8	.7	1.0	.9
Roofing	1.6	4.2	2.5	2.2
Miscellaneous	5.1	.1	3.5	4.0
Total	100.0	100.0	100.0	100.0

Carpenter work accounted for the largest percentage of the cost of residential building in each of the three cities for which data were obtained. In Decatur 45 cents of every dollar spent in the erection of residential buildings went for carpenter work, in Washington 33 cents, and in Cincinnati 31.4 cents. In the three cities combined 32.7 cents of each dollar spent for residential building went for carpenter work.

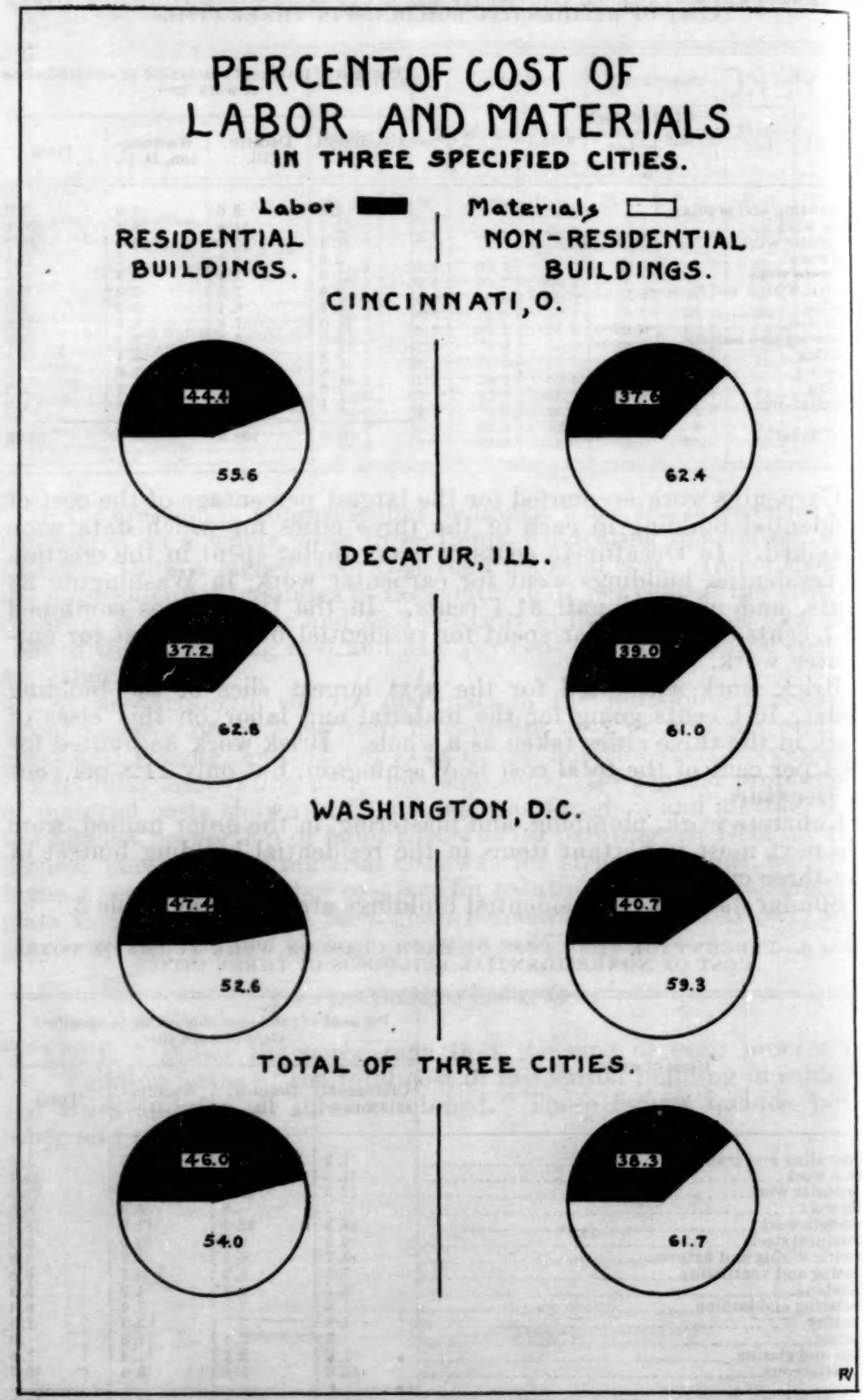
Brick work accounted for the next largest slice of the building dollar, 16.1 cents going for the material and labor on this class of work in the three cities taken as a whole. Brick work accounted for 18.4 per cent of the total cost in Washington, but only 11.8 per cent in Decatur.

Concrete work, plumbing, and plastering, in the order named, were the next most important items in the residential building budget of the three cities.

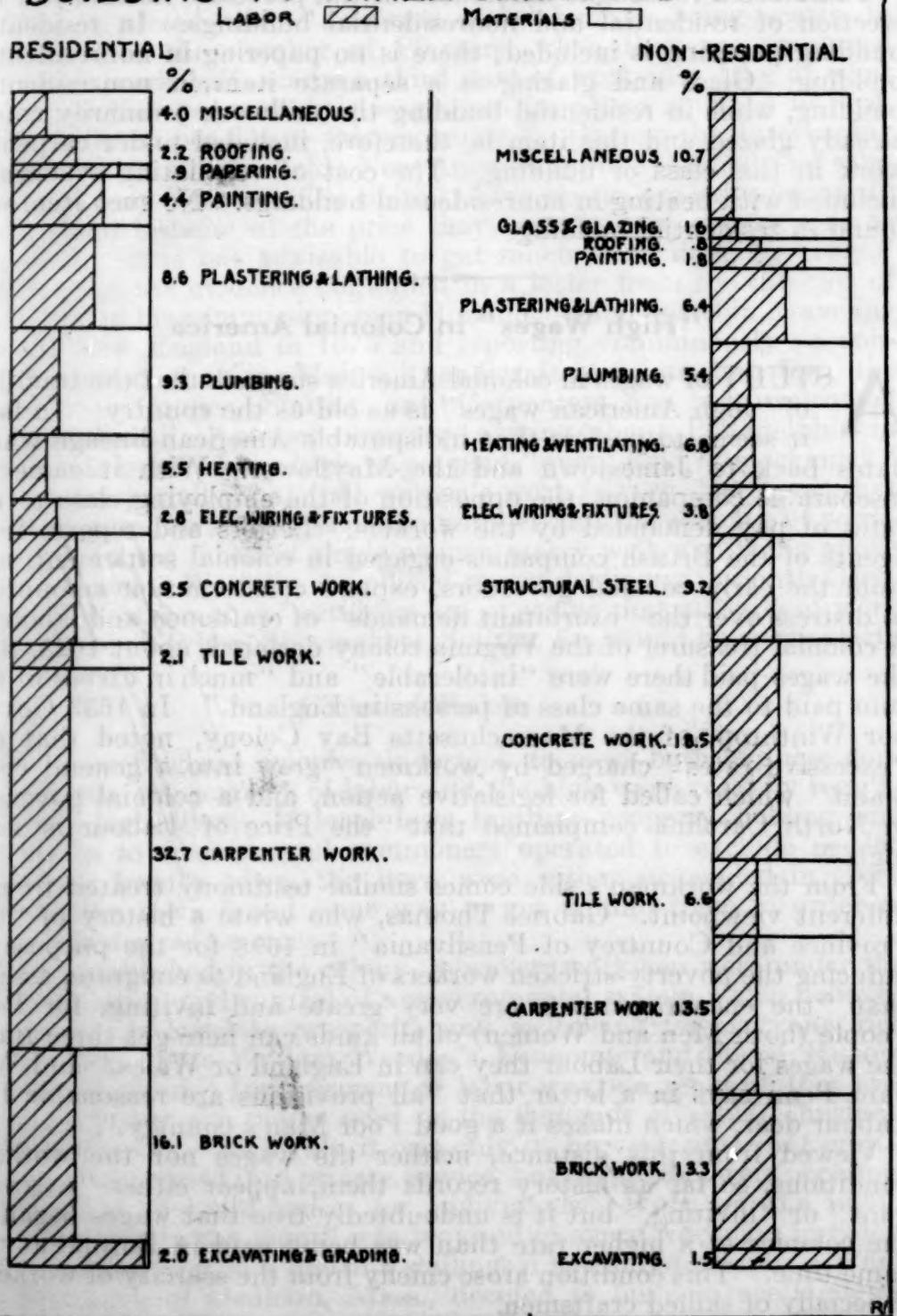
Similar data for nonresidential buildings are shown in Table 5.

TABLE 5.—PERCENTAGE THAT COST OF EACH CLASS OF WORK FORMS OF TOTAL COST OF NONRESIDENTIAL BUILDINGS IN THREE CITIES

Class of work	Per cent of total cost chargeable to specified class of work in—			
	Cincinnati, Ohio	Decatur, Ill.	Washington, D. C.	Total
Excavating and grading	1.2	2.2	2.3	1.5
Brick work	11.1	12.8	22.3	13.3
Carpenter work	12.9	15.8	14.8	13.5
Tile work	7.3	.9	6.9	6.6
Concrete work	18.3	32.0	11.9	18.5
Structural steel	9.3	6.7	10.0	9.2
Electric wiring and fixtures	3.7	6.4	3.2	3.8
Heating and ventilating	7.2	6.2	5.7	6.8
Plumbing	5.7	5.9	4.2	5.4
Plastering and lathing	7.3	2.3	5.4	6.4
Painting	1.6	2.7	2.3	1.8
Roofing	.3	2.4	1.3	.8
Glass and glazing	1.6	2.3	1.4	1.6
Miscellaneous	12.6	1.4	8.4	10.7
Total	100.0	100.0	100.0	100.0


PERCENT OF COST OF
LABOR AND MATERIALS
IN THREE SPECIFIED CITIES.
Labor
Materials
RESIDENTIAL BUILDINGS.
NON-RESIDENTIAL BUILDINGS.
CINCINNATI, O.
44.4
55.6
37.6
62.4
DECATUR, ILL.
37.2
62.8
39.0
61.0
WASHINGTON, D.C.
47.4
52.6
40.7
59.3
TOTAL OF THREE CITIES.
46.0
54.0
38.3
61.7

PERCENT THAT COST OF EACH CLASS OF WORK FORMS OF TOTAL COST OF BUILDING IN THREE SELECTED CITIES.



Concrete work accounts for the largest percentage (18.5) of the cost of nonresidential buildings in these three cities, followed by carpenter work with 13.5 and brick work with 13.3 per cent.

The distribution of costs is not uniform in the different cities. In Decatur 32 cents goes for concrete work and 12.8 cents for brick work, while in Washington 22.3 cents goes for brick work and only 11.9 cents for concrete work.

There are a few slight differences in the processes involved in the erection of residential and nonresidential buildings. In residential building papering is included; there is no papering in nonresidential building. Glass and glazing is a separate item in nonresidential building, while in residential building the millwork ordinarily comes already glazed and this item is, therefore, included under carpenter work in this class of building. The cost of ventilating systems is included with heating in nonresidential buildings. No such item was found in residential building.

"High Wages" in Colonial America

A STUDY of wages in colonial America suggests that the tradition of "high American wages" is as old as the country. In fact, it seems to possess that indisputable American lineage which dates back to Jamestown and the Mayflower. With it came its inseparable companion, the opposition of the employing class to the rates of pay demanded by the workers. Letters and reports from agents of the British companies engaged in colonial settlement, and from the early colonial governors, express consternation amounting to distress over the "exorbitant demands" of craftsmen and laborers. A colonial treasurer of the Virginia colony declared, about 1625, that the wages paid there were "intolerable" and "much in excess of the sum paid to the same class of persons in England." In 1633 Governor Winthrop, of the Massachusetts Bay Colony, noted that the "excessive rates" charged by workmen "grew into a general complaint" which called for legislative action, and a colonial governor in North Carolina complained that "the Price of Labour is very high."

From the workman's side comes similar testimony treated from a different viewpoint. Gabriel Thomas, who wrote a history of "the Province and Countrey of Pensilvania" in 1698 for the purpose of inducing the poverty-stricken workers of England to emigrate, asserts that "the encouragements are very greate and inviting, for Poor People (both Men and Women) of all kinds can here get three times the wages for their Labour they can in England or Wales," and William Penn says in a letter that "all provisions are reasonable but Labour dear, which makes it a good Poor Man's country."

Viewed from this distance, neither the wages nor the working conditions, so far as history records them, appear either "extravagant" or "inviting," but it is undoubtedly true that wages began in the colonies at a higher rate than was being paid in Europe at the same time. This condition arose chiefly from the scarcity of workers, especially of skilled craftsmen.

Scarcity of Labor

THROUGHOUT the colonial period this scarcity was a vital problem that influenced customs and legislation, and the record suggests that lack of sufficient craftsmen was a serious condition for more than a century. Governor Winthrop declared in 1630 that the "scarcity of workers caused them to raise their wages to an excessive rate"; a century and a quarter later Governor Dobbs, of North Carolina, reported that "artificers and labourers being scarce in comparison to the number of Planters, when they are employed they won't work half, scarce a third part of work in a Day of what they do in Europe, and their wages are from two shillings to 3, 4, and 5 shillings per Diem this currency." During the intervening years the same story is told; New Amsterdam in 1658 had "no sawyers" and only "one articled smith. Free smiths are extraordinarily scarce," and because of the price they were in consequence able to command, "it is not advisable to get much work done by them," according to the evidence contained in a letter from the director of the colony to his commissioners in Holland. John Josselyn, traveling through New England in 1675 and reporting voluminously on conditions, found that in Maine "handicraftsmen are but few, the Tumelor or Cooper, Smiths, and Carpenters are best welcomed amongst them." Another observer, writing about Philadelphia in 1710, remarks about the high wages paid "every kind of mechanick" and notes especially that "all women's work is very dear here; that proceeds from the smallness of the number and the scarcity of workers, for even the meanest single women marry well, and being above Want are above Work." An official report dealing with South Carolina in 1731 states that "artificers are so scarce that all sorts of work is very Dear; Taylors, Shoemakers, Smiths, &c.,would be particularly acceptable."

Control of Workers

THE New England colonies undertook to meet both of these conditions, the scarcity of labor and the high wage rate, by regulation and legislation. If local laws limiting property holding and citizenship to freemen and commoners operated to exclude needed tradesmen from a town, the laws were either suspended in given cases or the town found some way to get around them in order to secure the desired services.

Once established in the colony, however, workmen were under the rigid regulation and control of a governmental system which believed that "it could legislate prosperity and well-being for everyone, rich or poor," to quote William Weeden's Economic and Social History of New England. Impressment of labor was one tenet of that system, and either the public need or the demands of private business could enforce it. As a rule it was only in harvest time that craftsmen were impressed into private service, but carpenters were occasionally drafted to build houses for individuals. Work on the public roads one day in the month was required of every workman in Salem and he was subject to a fine of 3 shillings if he did not comply. When the selectmen of Dedham, Mass., decided to build a meetinghouse

in 1637 the committee in charge was authorized to "order men to worke upon the same."

Wage Legislation

It was in legislation dealing with wages that the authorities in the New England colonies made their most persistent efforts to control workers. Plymouth Colony and Massachusetts Bay passed similar laws in 1630 fixing a maximum rate of pay. In Massachusetts Bay Colony:

> It was ordered that Carpenters, Joyners, Brickelayers, Sawers, and Thatchers shal not take above 2s. a day, and 16d. a day if they have meate and drinke, nor any man shal give more, under paine of 10s. to taker and giver; and that sawers shal not take above 4s. 6d. ye hundred for boards, att six score to the hundred, if they have their wood felled and squared for them, and not above 5s. 6d. if they fell and square their wood themselves.
>
> It is ordered that labourers shal not take above 12d. a day for their days worke, and not above 6d. and meate and drinke, under paine of 10s. (Massachusetts Bay Colony Records.)

Although this law was not successful and operated less than three months, the court tried again in 1633, with lower rates and evidently greater determination, to dictate wages. The second ruling kept the same rate of 2s. a day for "master workmen"—building tradesmen, mowers, and wheelwrights—but the rate with "dyett" became 14d. a day instead of 16d. "Master taylors" were allowed 12d. and "inferior taylors" 8d. per day "with dyett." Instead of fixing the rate for laborers, as did the 1630 act, that of 1633 left its determination to the town constable and "two indifferent freemen."

At this period of colonial history, within a decade of the founding of the New England settlements, English sterling money was still in use in the colonies, and until 1640 at least was undoubtedly of the same value. Hence the rate of 2s. a day fixed by statute is presumably about 50 cents in the American equivalent, while the rate with board is 32 cents in the first act and 28 cents in the second for craftsmen and 24 cents for laborers.

Apparently it was not a simple matter to employ craftsmen at that rate. There were few settlers in the Bay Colony who did not have some land, cultivation of which undoubtedly paid better than day work at an arbitrarily fixed rate. Employers were soon overbidding the rate, and in a few cases were "presented" before the court and fined for violating the law. After a year of this, the clause fixing a penalty for paying more than the legal rate was repealed. The penalty for taking more was assessed against several workmen after it was no longer illegal to pay more, but this ill-balanced arrangement resulted in the repeal, in 1635, of the wage-fixing statute in its entirety.

Naturally wages went up. The highest rate for which workmen had been haled into court and fined was, according to the court records, 2s. 6d. (61 cents) per day. With legal restraints removed, skilled workers commanded 3s. (73 cents) a day, perhaps more in specific cases. Colonial authorities recognized that their legislative policy had failed, but, as Weeden expresses it, the idea "that labor could fix its own reward worried them exceedingly." Not unlike their successors of a much later day, when "divers complaints concerning oppression in wages, . . . to the great dishonor of God, the

scandall of the gosple and the griefe of divers of God's people" began to follow upon the repeal of wage legislation, the court appointed a commission of 29 men, including Endicott, Winthrop, Bradstreet, and Mather, "to bring into the next General Court their thoughts for the remediing of the same."

This communion of the best minds of Massachusetts Bay seems to have produced nothing more concrete than the adoption of a policy to advise and request each town to control its own wage rate, and the promulgation of the following declaration by the General Court:

> The Court, having taken into consideration the scarsity of money and the great abatement in the prices of corne, cattle and other commodities of the countrey, whereby it is impossible that men shall bee able to give such wages to servants, and other labourers and workmen as formerly, so as many think better to lay aside their busines and impliments (which would tende to the ruin of the Churches and the Commonwealth) than to spend the small remainder of their estates for the maintenance of others in such a way as will not afford them some equall recompence—it is therefore hearby declared that it is thought equall that all servants, labourers and workmen shall bee content to abate their wages according to the fall of the commodities wherein their labour is bestowed, and that they shall bee satisfied with payment in such things as are raised by their labour or other commodities which the countrey affoards, and that they are to be content now to partake in the present scarsity as well as they have had their advantage by the plenty of former times, and this Court shall account it great oppression in any that shall transgresse the intention of this order, and will have them proceeded with accordingly. (Massachusetts Bay Colony Records.)

While the General Court of the Bay Colony thus changed its policy from one of dictating a limit to what a workman might have for his work to one of thinking about what should content him, the court of Plymouth Colony retained its old legal rate of 2s., with no greater success at enforcement, and the towns of the Bay Colony undertook to carry out what the colonial authorities had passed on to them to handle. The wage rates fixed by the towns were lower than those in the colonial statutes, but that was because of the general depression and hard times following the crop failure of 1640. After that, "country pay" became the medium of exchange, and wage rates appear in terms of shillings' worth of farm produce rather than in the coin itself.

Indefinite Craft Lines

CRAFT distinctions, as we know them, were not made in the colonial and provincial eras, either in the performance of work or in the payment of wages. The mechanic was apt to be a jack-of-all-trades, even though he might also be master of his own, for his skill could be used to advantage outside his own craft. The building trades were generally combined in one person; a blacksmith and wheelwright might be a silversmith at the same time, and the shoemaker was, very likely, a tanner as well. A German traveler in Pennsylvania during the middle of the eighteenth century declared that "if anyone could or would carry on 10 trades, no one would have a right to prevent him," since the guild system of the old country had not been transplanted to the new.

It will be noticed that the rates fixed by the early colonial laws make slight distinction in the trades in the matter of wages, and that the difference between pay for skilled and for unskilled work is not great. In fact, in two instances of record, it is specifically stated

that all work should be paid for at the same rate. The men who worked upon the construction of the meeting-house in Dedham, in 1637, were to be assigned tasks to which they were "severally apted" and the same wages were to be paid "in all cases." In the reconstruction of a fort on Point Comfort, Va., the General Court ordered that mechanics and laborers should "all receive the same wages."

This condition held true until the beginning of the eighteenth century. Even then the differences between the crafts were not marked until trade organizations began to spring up toward the close of the century. By 1800, wage rates appear for numerous crafts, with fairly well-defined jurisdictional lines, but the rates themselves do not vary materially as between these different crafts, and the distinction between skilled and unskilled work is not so strongly reflected in their pay as it became later, with the development of a pronounced craft consciousness.

Contemporary Data on Prices

AN EARLY pronouncement of the relation between wages and prices is found in an order of the Massachusetts Bay Colony General Court in 1634, issued after the 1633 statute fixing wages. Referring to its wage enactment, by which "the wages of workemen were reduced to a certainety in regard of the great extorcion used by dyverse persons of little conscience," the court decides that:

> Nowe, lest the honest and conscionable workemen be wronged or discouraged by excessive prizes of those commodyties which are necessary for their life and comfort, we have thought it very just and equall to sett order also therein; wee doe therefore hereby order that after publique notice hereof, noe person shall sell to any of the inhabitants of this jurisdiction any provisions, cloathinge, tooles or other commodities above the rate of four pence in a shilling more than the same cost or might be bought for ready money in England, on paine of forfeiting the valewe of the things solde.

Bread prices were generally fixed by order of the colonial court or by town ordinances. These regulations controlled both the weight and the price of a loaf of bread, basing price on the current price of wheat flour. In the earliest days, bread sold at a penny a loaf, and governmental control dealt only with the weight that must be given for a penny. The Massachusetts General Court in 1696 fixed a sliding scale of loaf weights proportionate to the price of flour, ranging from 8¾ ounces when flour sold at 16s. per hundredweight, to 4⅜ ounces when flour cost 32s., the loaf of bread to sell in all cases at one penny. Speaking of the women of Pennsylvania who in 1698 earned "their own Livelihood by their own Industry," Thomas found their charges very high, "for I can buy in London a cheescake for Two pence, bigger than theirs for that price, when at the same time their milk is as cheap as we can buy it in London, and their Flour cheaper by one-half."

The determination of early American wages is complicated by the almost universal practice of providing workers with board at the place where they were engaged. That custom was, of course, always followed in the case of farm laborers and domestic servants, as it still is, but it was also very generally true of tailors and shoemakers, and, to some extent, of building-trades workers.

Another early practice which became the subject of frequent legislation and constant agitation is suggested in the following Massachusetts statute of 1645:

> Whereas it is found by too common and sad experience in all parts of the colony that the forcing of labourers and other workmen to take wine in pay for wages is a great nursery or preparative to drunkenness. * * * It is therefore ordered and ordained by this Court that no labourer or workman whatsoever shall after ye publication and promulgation hereof be inforced or pressed to take wine in pay for his labour.

Thomas Jefferson, referring to building-trades workers whom he had engaged on some remodeling work on his home in Virginia, enters in his diary: "I observe that their food and liquor has cost exactly 2s. (33 cents) on the day's labor." The manuscript account book of a blacksmith in Virginia, in the same general region as Jefferson's home, shows an entry of £15 ($50) for a year's board, at a slightly earlier period. In Pennsylvania in the same period, according to a visitor, "even in the humblest and poorest houses in this country there is no meal without meat, and no one eats the bread without butter or cheese, although the bread is as good as with us."

The young Republic carried out the tradition of "high American wages" which it had inherited from the Colonies, and met, as well, the attendant opposition. McMaster remarks that "it is impossible to read the many memorials which for 20 years (1790–1810) had been coming to Congress, without noticing the general complaint of the high price of wages. To us, when we consider the long hours of labor and the cost of living, these wages seem extremely low."

To risk a generalization, skilled workers, especially building-trades men, in the period between the establishment of the Republic and the beginning of the industrial era, received about the same amount of pay, for a day's work of 12 or 14 hours, that they now receive for an hour's work.

Stability of Employment in the Men's Clothing Industry

THE purpose of this study is to measure the degree of regularity of employment in the men's clothing industry and to ascertain whether regularity of employment has improved during recent years. The plan of analysis is the same as that employed in a similar study for the iron and steel industry, presented in the November, 1928, Labor Review. For the sake of clearness, the explanations given in that article are repeated here.

The basic data for the study are derived from the monthly reports made to the Bureau of Labor Statistics by practically all the important men's clothing factories, as part of the general employment survey made monthly by the bureau and covering almost 12,000 manufacturing plants in various lines of industry. As these reports give only the number of employees of all kinds without separation by occupational groups, the present analysis must disregard occupational differences and treat the employees of a plant as a unit.

The method here employed for the measurement of stability is that of the relationship of average monthly employment during the year to the number of employees in the month of maximum employ-

ment. Thus, if during 1927 a particular shop had a monthly average of 90 employees and the maximum number in any month was 100, then the stability of employment may be fairly said to be 90 per cent. In other words, if the 100 men needed to fill the positions at the busiest season had no other opportunity for work, then each man would have an opportunity of 90 per cent of full-time employment. Of course, this is rarely quite true, but it is often substantially true; and, in any case, the method offers a fairly accurate measure of the degree in which a particular establishment has attained a condition of stable employment. On the other hand, failure of an establishment to obtain a good level of stability in one or all occupations must not necessarily be attributed to faulty management. Many factors over which the management has little or no control may affect the stability of employment. Nevertheless, an employment stability of or very near to 100 per cent is the desirable goal.

The method of measuring employment stability just described has been used in this study because it is simple and clear. Somewhat more accurate measures of a mathematical character could be employed, but what they gain in accuracy is more than overbalanced by complexity in computation and explanation.

In this connection it is important to bear in mind that regularity of employment is an entirely different matter from volume of employment. Thus, the total number of employees in a plant may steadily decline from year to year with improving productive efficiency, while within each year the fluctuations in the number of employees, whether due to seasonal or other causes, may progressively diminish, with the result that the employees, though fewer in number, may have more steady work.

Results of the Study

THE percentages of full-time employment, computed as described above, have been worked out for 64 men's clothing establishments for each of the years 1923 to 1927 and for the 12-month period ending October, 1928, the results being presented in the accompanying table.

These 64 establishments represent all establishments engaged in making men's outer clothing for which data are available. Specialized products—such as caps, overalls, etc.—have been omitted, in order that those included might be fairly comparable as regards working conditions and as regards market influences.

The establishments are arranged in the table in descending order according to the favorableness of their showing in 1928.

A few of the interesting facts developed by an examination of the employment indexes in the table are cited below:

1. Judged by the averages, stability of employment in the men's clothing industry is bad and conditions have shown no improvement in the six years covered by the table. Thus the average stability for the plants reporting was only 87.9 per cent in 1923 and in no subsequent year was the percentage ever that high. Also, as shown by the last section of the table, this continuous low average over the six-year period was the resultant of an increasing number of plants with improving records and a corresponding increase in the number of plants with records which were growing worse. Thus in 1923 the

per cent of plants with employment stability rates of 95 per cent or over, was only 10.9 per cent as against 28.1 and 15.6 per cent in 1927 and 1928, respectively. On the other hand, the number of plants with stability rates of less than 80 per cent also increased from 15.6 per cent in 1923 to 21.9 in 1927 and to 23.4 in 1928.

2. While the general conditions of employment stability in the industry were bad and did not improve over the six-year period, a number of establishments nevertheless had excellent records. Thus establishments 4 and 6 had an average of more than 96 per cent of full-time employment for each of the six years, and several establishments show averages of more than 98 per cent in individual years.

PER CENT OF FULL-TIME EMPLOYMENT IN THE MEN'S CLOTHING INDUSTRY

Plant No.	Location	1923	1924	1925	1926	1927	12 months ending October, 1928
1	Cleveland, Ohio	92.5	88.9	93.8	81.6	96.8	98.6
2	Boston, Mass	61.9	96.3	93.0	96.5	96.4	98.5
3	Chicago, Ill	93.7	86.6	89.8	88.1	96.1	98.3
4	New York, N. Y	97.9	96.6	97.4	97.3	97.9	97.7
5	Rochester, N. Y	86.0	95.2	91.2	96.8	95.6	97.5
6	Boston, Mass	97.1	97.1	97.1	97.2	98.6	97.2
7	(1)	92.1	97.2	97.8	97.8	98.4	96.3
8	(1)	69.1	74.3	77.2	83.3	76.0	96.0
9	(1)	91.4	90.0	82.7	81.4	76.5	95.7
10	(1)	94.7	92.6	88.2	90.2	93.3	95.5
11	(1)	93.2	89.1	93.3	93.2	96.1	94.8
12	Boston, Mass	84.8	89.0	99.0	92.7	95.8	94.8
13	Rochester, N. Y	89.2	92.1	95.8	95.6	96.5	94.7
14	Boston, Mass	94.9	88.1	89.7	94.3	91.7	94.4
15	(1)	96.3	95.1	95.7	93.3	96.3	93.4
16	(1)	78.2	75.9	86.5	82.7	90.0	93.0
17	New York, N. Y	93.2	94.9	93.8	92.7	89.2	93.0
18	Chicago, Ill	89.7	79.9	89.4	93.7	94.9	92.6
19	Rochester, N. Y	95.0	91.9	92.6	96.4	93.8	92.1
20	(1)	97.3	88.9	86.5	88.8	73.3	92.1
21	Cleveland, Ohio	90.3	94.5	90.8	98.7	95.0	91.7
22	Buffalo, N. Y	89.4	82.2	79.0	88.0	87.2	91.0
23	Chicago, Ill	86.2	85.3	88.4	90.3	95.2	90.9
24	Philadelphia, Pa	73.0	93.3	73.5	94.1	90.6	90.8
25	(1)	86.2	84.7	84.1	86.8	88.9	90.6
26	Chicago, Ill	88.0	83.3	90.5	93.1	89.0	90.4
27	(1)	86.9	80.0	91.9	82.9	92.8	90.2
28	Cincinnati, Ohio	92.3	89.3	91.5	91.6	85.2	89.4
29	New York, N. Y	87.0	82.8	73.0	85.3	75.3	89.1
30	(1)	89.4	81.7	89.1	77.5	89.8	88.9
31	Cincinnati, Ohio	93.0	90.0	92.5	97.6	95.6	88.5
32	Pittsburgh, Pa	88.0	79.5	94.4	95.2	97.4	88.2
33	Cincinnati, Ohio	88.9	85.2	82.8	79.3	69.2	87.9
34	(1)	86.9	89.1	86.8	90.3	93.2	87.8
35	(1)	92.4	78.7	85.3	73.2	93.6	87.6
36	Pittsburgh, Pa	87.1	89.9	90.0	92.0	93.3	87.6
37	Philadelphia, Pa	87.3	90.5	91.2	88.5	88.7	87.3
38	Buffalo, N. Y	77.7	84.9	93.0	84.2	91.7	87.2
39	New York, N. Y	90.0	91.7	91.7	92.8	59.9	86.3
40	do	83.8	73.3	89.0	89.0	90.3	85.5
41	Cincinnati, Ohio	94.7	82.9	91.4	88.6	91.6	84.7
42	Baltimore, Md	85.6	73.8	79.9	82.8	88.2	84.6
43	Chicago, Ill	79.2	70.4	66.3	75.6	74.6	83.8
44	(1)	91.7	94.1	92.9	93.4	95.3	83.7
45	(1)	94.7	95.3	94.7	94.6	90.1	83.6
46	Rochester, N. Y	92.4	88.0	92.1	86.8	90.6	82.3
47	(1)	85.0	72.1	83.9	96.3	78.8	81.9
48	(1)	95.5	90.9	93.8	88.8	68.3	81.8
49	Cincinnati, Ohio	88.2	80.6	83.3	75.7	88.5	81.5
50	(1)	88.0	70.7	84.3	86.9	90.8	78.5
51	(1)	89.1	92.3	85.5	75.9	81.6	77.8
52	New York, N. Y	89.3	89.9	95.4	93.9	80.8	77.5
53	Rochester, N. Y	84.8	80.0	77.8	84.5	83.3	77.2
54	New York, N. Y	92.5	88.3	84.5	88.6	84.8	76.2
55	Philadelphia, Pa	85.4	56.0	85.6	85.1	84.0	75.2

[1] Location omitted in order to prevent possible identification of establishment.

PER CENT OF FULL-TIME EMPLOYMENT IN THE MEN'S CLOTHING INDUSTRY—Continued

Plant No.	Location	1923	1924	1925	1926	1927	12 months ending October, 1928
56	New York, N. Y.	73.6	84.9	85.9	82.1	79.2	73.7
57	do	77.3	66.1	76.7	48.2	84.7	72.6
58	do	88.5	96.4	95.4	94.4	61.5	72.0
59	do	96.1	95.1	95.0	91.4	95.3	71.4
60	do	67.2	80.0	64.2	90.2	82.9	69.2
61	(1)	78.1	76.8	81.2	82.8	88.4	57.9
62	(1)	93.8	80.8	67.5	82.8	60.7	55.4
63	Baltimore, Md.	88.4	43.6	73.1	72.1	72.2	49.1
64	St. Louis, Mo.	83.0	87.0	81.4	76.8	64.4	34.7
	Average	87.9	85.1	85.8	87.8	87.0	85.1
	Highest	97.9	97.2	99.0	98.7	98.6	98.6
	Lowest	61.9	43.6	64.2	48.2	59.9	34.7
	Per cent of plants with employment stability of—						
	95 per cent and over	10.9	14.1	14.1	17.2	28.1	15.6
	90 to 94.9 per cent	29.7	20.3	32.8	31.3	23.4	26.6
	85 to 89.9 per cent	37.5	23.4	21.9	20.3	15.6	20.3
	80 to 84.9 per cent	6.3	20.3	14.1	17.2	10.9	14.1
	Under 80 per cent	15.6	21.9	17.2	14.1	21.9	23.4

[1] Location omitted in order to prevent possible identification of establishment.

Legal Restrictions on Hours of Labor of Men in the United States

EVERY State in the United States has legislation regulating the hours of labor of employees. The most general and accepted is that limiting the working time of minors, although laws relating to hours of labor of women are also now quite general throughout the Union. The regulation of the working hours of men has been slower of development and acceptance because of being subject to constitutional limitations.

The present article shows existing legislation regulating the hours of labor of men and gives a review of the decisions of the United States Supreme Court on the constitutionality of such legislation. Similar articles covering laws relating to women and minors will appear in future issues of the Review. The laws relating to men have been presented first because they generally include women and minors (unless otherwise provided for), are more strictly limited to particular occupations, have been less generally accepted, are more varied in nature, and generally have had more difficulty in gaining acceptance as valid constitutional regulations of the employment contract.

Statutes requiring a weekly day of rest or "one day's rest in seven," are, in several instances, of a general nature and include men.[1] This subject will be dealt with in a future issue of the Review. Legislation requiring rest periods and prohibiting night work or prohibiting employment in particular occupations will also receive attention later.

Legislation on hours of labor falls into several classifications:

1. Laws declaring the policy of the State as to the number of hours that shall constitute a day's work in the absence of contractual agreement between the parties to the employment contract. As a rule,

[1] See acts of California, Massachusetts, Minnesota, New York, and Porto Rico in Bul. No. 370 of the Bureau of Labor Statistics.

no penalty is provided for. It is doubtful whether penalties, if any, are enforced or damages collected for overtime work.[2]

2. Laws fixing a maximum number of hours for men. These laws are generally not limited to men, but include also women and minors unless they are otherwise provided for by law. These laws usually have penalty and enforcement provisions. They may be divided into several groups:

(*a*) Legislation limiting the hours of labor of workmen employed on public works.

(*b*) Legislation for the protection of the safety and health of the general public (as, for instance, acts covering railroad and railway operating employees, seamen, and drug clerks).

(*c*) Legislation limiting the hours of labor of employees in obviously dangerous or unhealthful employments (as in mines, smelters, tunnels, and in certain types of mills).

(*d*) Legislation limiting the hours of labor in employments less obviously dangerous than in mines, smelters, etc., but in which investigation proves that there is direct correlation between the hours worked and the safety and health of the employees and that the safety and health hazard can be considerably reduced by a limitation in the hours of labor worked.

3. Laws fixing a maximum number of hours for females. These laws include all females except certain minors otherwise provided for. The degree of reasonableness in the regulations of the hours of women may not necessarily be the same as that for men, as women's physical structure is not so strong as that of men.

4. Laws fixing a maximum number of hours for certain minors. The hours of labor of female employees from a particular age (generally 16) up to 21 is usually the same as that of other females. The laws very generally limit the hours of labor of minors between the ages at which employment of minors is permitted (usually 14) up to an age at which it is probably considered that they are sufficiently strong to carry on the tasks for the same number of hours as adults—usually 16, but sometimes 18 in the case of females.

5. Laws requiring a day of rest. The early legislation of this type took the form of prohibiting employment on Sunday.

The newer development permits certain employments to be carried on on Sunday because of necessity or public convenience, but requires that workers in these employments be given one day of rest in seven. Where "one day of rest in seven" does not exist, the "Sunday rest" law is effective as to some employments.

6. The prohibition of night work of women and minors. Like hour legislation, laws prohibiting the employment of women between certain hours at night (usually 7 p. m.) and a fixed hour in the morning (usually 6 a. m.) are applicable to females generally and include certain minors unless they are otherwise specifically provided for. Many of the child-labor laws include provisions, usually applicable to children between 14 and 16 years of age, prohibiting night work. Some statutes attempt to prohibit night work for men by fixing the

[2] These laws are of little value, and as they are mere legislative declarations in most part, they have not been included in the present study. (See U. S. Bureau of Labor Statistics Bul. 370: California, Connecticut, Florida, Illinois, Indiana, Maine, Michigan, Minnesota, Montana, New Hampshire, New York, Ohio, Rhode Island, Wisconsin.)

maximum number of hours, as in mines, and providing further that the men will not be required to start their employment prior to a fixed hour, as 6 a. m.

7. Laws requiring rest periods. These laws may be divided into several classes:

(*a*) Those prohibiting the employment of men for more than a fixed number of hours within a given period, such as legislation prohibiting the employment of railroad or railway operating employees from working more than 10 hours per day in 12 consecutive hours or 16 consecutive hours in 24, insuring a proper interval for rest, and making it certain that the hour legislation can not be violated in principle though technically complied with.

(*b*) Those requiring the hours of labor, usually of females and minors, to be so arranged that a sufficient period or interval be allowed during the course of the eight hours, or other period set, to enable the employees to eat or rest, or both. This provision is quite common in the laws relating to hours of labor of women.

Hours of Labor of Men

Public Works

THE State and the Federal Government may fix the hours of labor of persons employed by them. Early attempts to pass 8-hour laws for public employees were looked upon as in the nature of a direction from a principal to his agent that eight hours be deemed to be a proper length of time for a day's work, and that contracts should be based upon that theory but that the law did not necessarily provide that the employer and the laborer may not agree with each other as to what time should constitute a day's work independent of the statute. This attitude was taken in the case, United States *v.* Martin, 94 U. S. 400 (1876). This decision made it evident that, to be effective, the statutes must be mandatory and provide penalties for violations. Such statutes were passed and extended to include contractors and subcontractors engaged in the construction of public works for the State or one of its Governmental subdivisions. The constitutional power of the States to pass such statutes was immediately questioned in the courts. A test case arose in Kansas which went to the Supreme Court of the United States where the statute was upheld, in the year 1903, as a constitutional exercise of power. The court said that it could "imagine no possible ground to dispute the power of the State to declare that no one undertaking work for it or for one of its municipal agencies should permit or require an employee on such work to labor in excess of eight hours each day, and to inflict punishment upon those who are embraced by such regulations and yet disregard them. It can not be deemed a part of the liberty of any contractor that he be allowed to do public work in any mode he may choose to adopt, without regard to the wishes of the State. On the contrary, it belongs to the State, as the guardian and trustee for its people, and having control of its affairs, to prescribe the conditions upon which it will permit public work to be done on its behalf, or on behalf of its municipalities." The court rested its decision "upon the broad ground that the work

being of a public character, absolutely under the control of the State and its municipal agents acting by its authority, it is for the State to prescribe the conditions under which it will permit work of that kind to be done." (Atkin *v.* Kansas, 191 U. S. 207, 222, 224 (1903).)

A case involving the constitutionality of a similar Federal act was decided by the United States Supreme Court in 1907. Counsel attempted to distinguish the State from a Federal law, on the ground that the Congress did not have the general power of legislation possessed by the legislatures of the States. In upholding the constitutionality of the act the court replied to this contention by stating that "it may be true that the object of this law is of a kind not subject to its general control. But the power that it has over the mode in which contracts with the United States shall be performed can not be limited by a speculation as to motives. If the motive be conceded, however, the fact that Congress has not general control over the conditions of labor does not make unconstitutional a law otherwise valid, because the purpose of the law is to secure to it certain advantages, so far as the law goes." (Ellis *v.* United States, 206 U. S. 246, 256 (1907). See also United States *v.* Garbish, 222 U. S. 257 (1911), holding that the repairing of levees along the Mississippi River was subject to the act and can not be classed as an extraordinary emergency within the exceptions of the act.)

The following jurisdictions have enacted laws limiting the hours of labor of workmen engaged on public works to eight hours:

Alaska: Acts of 1913, chapter 7.
Arizona: Revised Statutes, 1913, paragraph 3103.
California: Sims' Deering's Codes 1906, Penal Code, section 653c as amended by Acts of 1927, chapter 257.
Colorado: Compiled Laws, 1921, section 4175.
Delaware: Revised Code, 1915, paragraph 2160, section 45 (limited to Wilmington).
District of Columbia: Compiled Statutes, 1916, Supplements 1919, 1923, sections 8918–8922.
Hawaii: Revised Laws, 1915, sections 161–162.
Idaho: Compiled Statutes, 1919, section 2324, as amended by Acts of 1923, chapter 93.
Indiana: Burns' Annotated Statutes, 1914, section 7977–7980.
Kansas: General Statutes, 1915, section 5870, as amended by Acts of 1923, chapter 157.
Kentucky: Statutes of 1915, section 2290B.
Maryland: Public Local Laws, Code 1888 (limited to Baltimore), article 4, section 31a, as amended by Acts of 1910, chapter 94, page 642.
Massachusetts: General Laws of 1921, chapter 149, section 30, as amended by Acts of 1923, chapter 236.
Minnesota: General Statutes, 1913, section 3832, as amended by Acts of 1921, chapter 388.
Montana: Revised Code, 1921, section 3079.
Nevada: Revised Laws, 1919, volume 3, page 2966, Acts of 1919, chapter 203.
New Jersey: Acts of 1913, chapter 253.
New York: Consolidated Laws, 1909, chapter 31, article 8, section 220, as amended by Acts of 1921, chapters 50 and 642 (with certain exceptions).
Ohio: General Code, 1910, section 17–1, added by Acts of 1913, page 854, amended by Acts of 1919, page 1286.
Oklahoma: Revised Laws, 1910, section 3758.
Oregon: Laws, 1920, section 6718, as amended by Acts of 1923, chapter 24; Laws 1920, sections 6721, 6722.
Pennsylvania: Pennsylvania Statutes, 1920, section 18270–1.
Porto Rico: Acts of 1913, No. 140; Acts of 1923, No. 11; Acts of 1925, No. 54.
Texas: Acts of 1913, chapter 68; Acts of 1921, chapter 121.

Utah: Compiled Laws 1917, section 3666.
Washington: Codes and Statutes, 1910, sections 6572–6576.
West Virginia: Code 1913, Supplement of 1918, sections 713–715.
Wisconsin: Statutes of 1923, section 103.41.
Wyoming: Acts of 1913, chapter 90.
United States: United States Code, Title 40, sections 321–326, 44 Stat., Part 1, 1307.

Private Employment

Legislation on hours of labor was upheld as a valid exercise of the legislative power to protect the lives, the health, and the morals of its citizens as early as 1898. Though there was some question of the validity of this legislation following a decision in 1905 holding an hour law for bakeries invalid, the courts now uphold the constitutionality of reasonable hours of labor legislation based upon the reasoning that the physical well-being of the population is an object of public interest.

The first important decision of the United States Supreme Court on the constitutional question of the power of a legislature to fix a maximum number of hours of labor which persons may work in private employment was that of Holden *v.* Hardy (169 U. S. 366), decided by the United States Supreme Court in 1898. The opinion of the court recognizing the power in the legislature to fix the maximum hours of labor of persons in underground mines or in smelters and ore refineries to eight hours has been a landmark in the decisions of the court and has been freely quoted by the court in later decisions sustaining legislation furthering the protection of the health, safety, and morals of employees and of the public.

An act of Utah of 1896 fixed the hours of workingmen in all underground mines, in smelters, and all other establishments for the reduction or refining of ores or metals, at eight hours per day. The Supreme Court sustained the act as a valid exercise of the police power of the State as being within the power of the legislature to protect the lives, the health, and the morals of its citizens. In doing so, however, it pointed out that the enactment did not profess to limit the hours of all workmen but merely those who are employed in underground mines or in smelting, reducing, or refining ores or metals, which employments "when too long pursued the legislature has judged to be detrimental to the health of the employees, and, so long as there are reasonable grounds for believing that this is so, its decision upon this subject can not be reviewed by the Federal courts." The court said that "while the general experience of mankind may justify us in believing that men may engage in ordinary employments more than eight hours per day without injury to their health, it does not follow that labor for the same length of time is innocuous when carried on beneath the surface of the earth, where the operative is deprived of fresh air and sunlight, and is frequently subjected to foul atmosphere and a very high temperature, or to the influence of noxious gases, generated by the processes of refining or smelting."

The court further said that "the fact that both parties are of full age and competent to contract does not necessarily deprive the State of the power to interfere where the parties do not stand upon an equality, or where the public health demands that one party to the contract shall be protected against himself. 'The State still retains an interest in his welfare, however reckless he may be. The whole

is no greater than the sum of all the parts, and when the individual health, safety and welfare are sacrificed or neglected, the State must suffer.'" (Holden *v.* Hardy, 169 U. S. 366, 395–397 (1898).)

Seven years later, in 1905, the United States Supreme Court was asked to pass on the constitutionality of the New York statute providing that no employees shall be required or permitted to work in bakeries more than 60 hours a week or more than 10 hours a day. The court held that "the limitation of the hours of labor as provided for in this section of the statute, * * * has no such direct relation to and no such substantial effect upon the health of the employee, as to justify us in regarding the section as really a health law," that "it seems to us that the real object and purpose were simply to regulate the hours of labor between the master and his employees (all being men, *sui juris*) in a private business, not dangerous in any degree to morals or in any real and substantial degree, to the health of the employees," and that "under such circumstances the freedom of master and employee to contract with each other in relation to their employment, and in defining the same, can not be prohibited or interfered with, without violating the Federal Constitution." Four of the nine justices taking part in this decision dissented and 2 dissenting opinions were written. (Lochner *v.* New York, 198 U. S. 45, 64, 65, 74 (1905).)

In 1917 a statute of Oregon limiting the hours of labor of any person, whether man or woman, working in any mill, factory or manufacturing establishment to 10 hours a day, with a proviso as to overtime, was upheld as constitutional by the United States Supreme Court. Because of the overtime provisions it was contended that the law was a wage law, but the court upheld it as regulation of hours of labor. The court said that "it is enough for our decision if the legislation under review was passed in the exercise of an admitted power of Government; and that it is not as complete as it might be, not as rigid in its prohibitions as it might be, gives perhaps evasion too much play, is lighter in its penalties than it might be, is no impeachment of its legality. This may be a blemish, giving opportunity for criticism and difference in characterization, but the constitutional validity of legislation can not be determined by the degree of exactness of its provisions or remedies. New policies are usually tentative in their beginnings, advance in firmness as they advance in acceptance. They do not at a particular moment of time spring full-perfect in extent or means from the legislative brain. Time may be necessary to fashion them to precedent customs and conditions and as they justify themselves or otherwise they pass from militancy to triumph or from question to repeal." "Our judgment of it is, that it does not transcend constitutional limits." (Bunting *v.* Oregon, 243 U. S. 426, 438 (1917).) Three of the nine justices dissented. One, Mr. Justice Brandeis, took no part in the decision of the case.

The opinion in the Bunting case did not mention the Lochner case. Mr. Chief Justice Taft, in Adkins *v.* Children's Hospital, 261 U. S. 525, 564 (1923), states that "no one can suggest any constitutional distinction between employment in a bakery and one in any other kind of a manufacturing establishment which should make a limit of hours in the one invalid, and the same limit in the other permissible," and "it is impossible for me to reconcile the Bunting case and the

Lochner case and I have always supposed that the Lochner case was thus overruled *sub silentio*." Mr. Justice Holmes, in the Adkins case, said that he had supposed that the Lochner case "would be allowed a deserved repose."

As the Bunting case upholds the constitutionality of a statute fixing a maximum number of hours for men in mills, factories, and manufacturing establishments at 10 hours, it is probable that State legislatures have the power to fix the maximum number of hours for men at less than 10 in view of the language of the court in a case upholding the validity of a California statute fixing the maximum number of hours for women at 8 hours. (Miller *v.* Wilson, 236 U. S. 373, 382 (1915).) The court said that "it is manifestly impossible to say that the mere fact that the statute of California provides for an 8-hour day, or a maximum of 48 hours a week, instead of 10 hours a day or 54 hours a week, takes the case out of the domain of legislative discretion."

The Lochner case has not been cited by the United States Supreme Court as an authority on the question of the fixing of hours of labor since the decision of the case. It has been cited on several occasions to sustain the general proposition that the right of the individual to contract must not be unreasonably interfered with, and that if the statutes are unreasonable and arbitrary and beyond the necessities of the case the courts will declare them invalid. (See Welsh *v.* Swasey, 214 U. S. 91, 105 (1909); Chicago, Burlington & Quincy R. R. Co. *v.* McGuire, 219, U. S. 549, 566 (1911); Meyer *v.* Nebraska, 262 U. S. 390, 399 (1923); Adair *v.* United States, 208 U. S. 161, 173 (1908); Adkins *v.* Children's Hospital, 261 U. S. 525, 548 (1923).) The mere citation of the Lochner case in the case of Adkins *v.* Children's Hospital to sustain the proposition that the fixing of a maximum wage for adult women is an arbitrary and unreasonable exercise of legislative power called forth statements from Mr. Chief Justice Taft and Mr. Justice Holmes, quoted above.

The Supreme Court had before it in 1915 the question of the constitutionality of certain provisions of the Mississippi 10-hour labor law, but this question was not decided, as the decision was based on the right of a stockholder to maintain a right of action. (Wathen *v.* Jackson Oil Co., 235 U. S. 635 (1915).)

Railroad employment.—The Federal hours of service act of March 4, 1907 (34 Stat. 1415), in which the hours of labor of employees who were connected with the movement of trains in interstate transportation were restricted, was held constitutional on a basis different from that of an act of a State regulating the hours of labor of men generally. As Congress is without the general power over the conditions of labor that is found in the States, the constitutional basis of the Federal law is found among the specific powers given to Congress by the Federal Constitution: The power to regulate interstate and foreign commerce, and therefore to enact laws for the safeguarding of the persons and property transported in that commerce. In the case coming before the United States Supreme Court testing the Federal hours of service act for railroads, the court said that as to whether the restriction was comprehended within the sphere of authorized legislation the question "admits of but one answer," that "the length of hours of service has direct relation to the efficiency of the human agencies upon which protection to life and property necessarily depends," that "in

its power suitably to provide for the safety of employees and travelers, Congress was not limited to the enactment of laws relating to mechanical appliances, but it was also competent to consider, and to endeavor to reduce, the dangers incident to the strain of excessive hours of duty on the part of engineers, conductors, train dispatchers, telegraphers, and other persons embraced within the class defined by the act. And in imposing restrictions having reasonable relation to this end there is no interference with liberty of contract as guaranteed by the Constitution." (Balt. & Ohio R. R. *v.* Int. Com. Comm., 221 U. S. 612, 619 (1911); Adamson Law, railroad 8-hour day, upheld, act of Congress, Sept. 3, 5, 1916, 39 Stat. 721, Wilson *v.* New, 243 U. S. 332 (1917). See also Missouri, K. & T. Ry. Co., *v.* United States, 231 U. S. 112 (1913); Atchison, T. & S. F. Ry. Co. *v.* United States, 244 U. S. 336 (1917); Atchison etc. Ry. *v.* United States, 269 U. S. 266 (1925); Chicago & Alton R. R. Co. *v.* United States, 247 U. S. 197 (1918); United States *v.* Brooklyn Terminal, 249 U. S. 296 (1919).)

Legislation regulating hours of labor of railroad employees has been passed in several States but has not been included in this study, as Congress has passed legislation regulating the hours of labor of certain railroad employees. In the case of Erie Railroad Co. *v.* New York (233 U. S. 671 (1914)) the United States Supreme Court held a State law of this kind unconstitutional because it conflicted with the Federal law. The Supreme Court said that "where there is a conflict the State legislation must give way," and "when Congress acts in such a way as to manifest its purpose to exercise its constitutional authority the regulating power of the State ceases to exist." (See also the case of Northern Pacific Railway *v.* Washington, 222 U. S. 370 (1912).)

JURISDICTIONS HAVING LAWS LIMITING THE HOURS OF LABOR OF MEN IN PRIVATE EMPLOYMENT

State	Maximum hours		Occupations or industries covered	Citation
	Daily	Weekly		
Alaska	8		Underground mines	Acts of 1917, chapter 4.
Arizona	8		Certain employees in mines and smelters	Revised Statutes, 1913, paragraph 3108.
	8		Mines, smelters, reduction works, stamp mills, concentrating mills, chlorinating processes, cyanide processes, cement works, rolling mills, rod mills, coke ovens, blast furnaces.	Penal Code, 1913, section 713.
	8		Certain employees in electric light and power plants.	Revised Statutes, 1913, paragraph 3099.
Arkansas	10		Saw and planing mills	Digest, 1921, section 7082.
California	12		Certain street-railway employees	Sims' Deering's Codes, 1906, 3246.
	8		Underground workings and mines, smelters, reduction and refining of ores or metals.	Acts of 1913, chapter 186.
	9		Drug clerks	Sims' Deering's Codes, 1906, Act No. 2665 as amended by Acts of 1921, chapter 765, and Acts of 1925, chapter 394.
Colorado	8		Underground workings and mines, smelters, reduction works, stamp mills, concentrating mills, chlorination processes, cyanide processes, and coke ovens.	Compiled Laws, 1921, section 4173.
	8		Cement and plaster manufacturing plants	Acts of 1927, chapter 87.
Georgia	10	60	Cotton and woolen manufacture, except: Engineers, firemen, watchmen, mechanics, teamsters, yard employees, clerical forces, cleaners, repairmen.	Code of 1910, section 3137, as amended by Acts of 1911, page 65, Act No. 279.

JURISDICTIONS HAVING LAWS LIMITING THE HOURS OF LABOR OF MEN IN PRIVATE EMPLOYMENT—Continued

State	Maximum hours		Occupations or industries covered	Citation
	Daily	Weekly		
Idaho	8		Underground workings and mines, smelters, ore-reduction works, stamp mills, concentrators, and other ore-refining establishments.	Compiled Statutes, 1919, sections 2327–2329.
Kansas	8		Lead and zinc mines	Acts of 1917, chapter 242.
Louisiana	10 in 12		Certain street-railway employees	Revised Laws, 1897, page 766, as amended by Acts of 1902, No. 122.
Maryland	10		Mines (Allegany and Garrett Counties)	Public Local Laws, Code of 1888, section 194.
	10		Cotton and woolen mills [1]	Public General Laws, Codes of 1911, 1914, article 100.
Massachusetts	9 in 11		Certain street-railway employees	General Laws, 1921, chapter 161, section 103.
Michigan	[2] 10		Factories, workshops, salt blocks, sawmills, logging or lumber camps, booms or drives, mines or other places used for mechanical manufacturing or other purposes.[2]	Compiled Laws, 1915, sections 5587, 5588.
Mississippi	10	55	Mill, cannery, workshop, factory, or manufacturing establishment.	Acts of 1914, chapter 164 as amended by Acts of 1924, chapter 314, section 2.
	10		Manufacturing or repairing	Acts of 1912, chapter 157 as last amended by Acts of 1916, chapter 239.
Missouri	8		Mines, smelters, plate glass manufacturing	Revised Statutes, 1919, sections 6767, 6769, 7465–6.
Montana	8		Underground mines or tunnels, mine hoisting operator, smelters, stamp mills, sampling works, concentrators, ore reduction and refining establishments, and washing or treatment of coal.	Revised Codes, 1921, sections 3068–3073, 3079.
	9		Telephone switchboard in cities having population of 3,000 or over.	Revised Codes, 1921, section 3074.
Nevada	8		Underground mines, and mechanics, engineers, blacksmiths, carpenters, top men, and all workmen working around the surface of such mines, in open mines in smelters, ore and metal refineries; in plaster and cement works.	Revised Laws, 1912, 1919, sections 1941, 6554, 6555, 6559, and Acts of 1927, chapter 105.
New Jersey	12 in 12		Certain street-railway employees	Compiled Statutes, 1910, page 5008, section 57.
	([3])		Work in compressed air [3]	Acts of 1914, chapter 121.
New York	([3])		Work in compressed air [3]	Consolidated Laws, 1909, chapter 31, article 15, sections 425–437, as amended by Acts of 1921, chapter 50.
	10		Brickyards	Consolidated Laws, 1909, chapter 31, article 5, section 163, as amended by Acts of 1921, chapter 50.
	8		Railway signalmen	Consolidated Laws, 1909, chapter 31, article 5, sections 164, 165, 166, as amended by Acts of 1921, chapter 50.
	10		Street-railway employees	
	16		Railroad-operating employees	
		70	Drug clerks	Consolidated Laws, 1909, chapter 45, article 17, section 236 as amended by Acts of 1914, chapter 514.

[1] See laws for detailed provisions and exceptions.
[2] Declaratory and regulatory act.
[3] See schedule of hours in law depending on air pressure.

JURISDICTIONS HAVING LAWS LIMITING THE HOURS OF LABOR OF MEN IN PRIVATE EMPLOYMENT—Continued

State	Maximum hours		Occupations or industries covered	Citation
	Daily	Weekly		
New York	11	70	Grocery clerks	Consolidated Laws, 1909, chapter 45, article 17, section 236–a added by Acts of 1915, chapter 343.
North Carolina	11		Factory and manufacturing establishments, except: Engineers, firemen, superintendents, overseers, section and yard hands, office men, watchmen, repairmen.	Consolidated Statutes, 1919, section 6554.
North Dakota	8		Coal mines	Acts of 1919, chapter 168, as amended by Acts of 1923, chapter 246.
Oklahoma	8		Underground mines	Revised Laws, 1910, section 4005.
Oregon	8		do	General Laws, 1920, section 6716.
	10		Mill, factory, manufacturing establishments	General Laws, 1920, section 6708 as amended by Acts of 1923, chapter 122.
	8	48	Sawmills, planing mills, shingle mills, and logging camps.	
Pennsylvania	12		Certain street-railway employees	Statutes of 1920, section 6215.
	[3]		Work in compressed air [3]	Statutes of 1920, sections 5424–5436.
	8		Mine hoisting engineers	Statutes of 1920, section 15251.
Rhode Island	10 in 12		Certain street-railway employees	General Laws, 1923, chapter 252.
South Carolina	10		Interurban railway employees	Acts of 1916, No. 544.
	12		Certain street-railway employees	Criminal Code, 1912, section 431.
	10	55	Cotton and woolen mills	Criminal Code, 1912, section 421, as amended by Acts of 1922, No. 567.
Utah	8		Underground workings and mines, smelters, and other institutions for the reduction of ores.	Compiled Laws, 1917, section 3667.
Washington	10		Certain street-railway employees	Statutes of 1910, section 6578.
	8		Coal mines	Codes and Statutes, 1910, sections 6583–6585.
	10		Employees engaged in transporting men in and out of mines.	
Wyoming	8		Underground mines, smelters, stamp mills, sampling works, concentrates, and all other institutions for the reduction of ores and refining of ores or metals.	Compiled Statutes, 1910, sections 3499, 3500.
United States	8		Underground workers on leased mineral lands of the United States.	Act of Congress, Feb. 25, 1920 (41 Stat. 449).
	[4] 8		Railroad operating employees	Act of Congress, Sept. 3, 1916 (39 Stats. 61).
	[5] 16		Persons engaged in or connected with the operation of trains.	Act of Congress, Mar. 4, 1907 (34 Stat. 1415–1417).
	9		Telegraph operators and train dispatchers in continuously operated stations, 9 in 24 hours; in day-time stations, 13 in 24.	
	13			
	[6] 9		Deck officers on vessel	Act of Congress, Mar. 3, 1913 (37 Stat. 733).
	[7] 12			
	[8] 9		Seamen	Act of Congress, Mar. 4, 1915 (38 Stat. 1164).
	[8] 8			
	[8] 12			

[3] See Schedule of hours in law, depending on air pressure.
[4] 8 hours is used as a standard in computing the wages of the employee.
[5] These hours are the maximum hours permitted; after 16 hours' consecutive work 10 hours off is necessary, but if any 16 in 24 hours, then 8 hours off.
[6] While in port.
[7] While at sea; after leaving port no duty unless officer had 6 hours off duty within the 12 hours immediately preceding time of sailing.
[8] While at sea sailors shall be divided into 2 watches, and firemen, oilers, and water tenders into 3 watches. While in safe harbor no seaman shall be required to do any unnecessary work on Sunday. Act also limits work to 6 days per week.

Beneficial Activities of American Trade-Unions

THE Bureau of Labor Statistics recently completed a study of the fields entered by American labor organizations, the results of which are presented in its Bulletin No. 465.[a] It is generally known that labor organizations have gradually extended their scope, in many cases far beyond the original rather restricted field of concern for wages, hours, and working conditions. But it is believed that few persons, except students of the labor movement, have a realization of the ramifications and extent of trade-union activities. The attempt was made by this study to bring together data on some of the less well-known ventures of labor organizations, as well as to show what the unions are doing for their members in various ways, apart from their strictly economic struggle for the betterment of earnings, working hours, and general working conditions. Workers' education was not covered in this survey, for the work of the labor movement in that field is so varied and extensive as to form in itself a separate study.

After collective bargaining is gained by the organization the provision of "benefits" is usually the next step. Then may be undertaken measures intended to improve the workers' economic position, such as the establishment of labor banks, credit unions from which members may obtain loans, building and loan associations, legal aid departments, construction of homes, supply of services or goods by such means as mail-order buying, cooperative stores, etc. Or unions may undertake social or protective measures, such as the establishment of various kinds of insurance, of definite health services, etc., or educational or recreational activities. Finally, as conditions in the industry become more or less stabilized and the union ceases to have to fight for its existence, union leaders have greater leisure to consider broader problems, those of the industry and even of society in general. At the unemployment conference sponsored by organized labor, which was held in the spring of 1927, one labor representative expressed himself to the effect that "the time has passed when trade-unions could confine their efforts to strictly organizational matters, and every union should now have its affairs so arranged that its officers will have time to devote to the big economic and industrial issues, such as unemployment."

There are still a number of labor unions which regard all union activities aside from collective bargaining for wages, hours, and conditions, the payment of strike and lockout benefits, and possibly of death benefits, as "frills" quite secondary to the real purpose of trade-unions and which they would do better to leave alone. In general, however, it may be said that the more prosperous and progressive the union the greater its endeavors to extend the field of its service to the members. The advantages placed at the service of the members redound to the benefit of the organization as such as well as to the membership, for they serve as an added inducement toward joining the organization besides increasing the solidarity of the membership.

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[a] Data on certain phases of the study have been presented in various issues of the Labor Review during 1928, as follows: Trade-union benefits, January (pp. 1–16); pensions and homes for the aged, February (pp. 1–20); action in regard to unemployment, March (pp. 8–24); recreational activities, May (pp. 5–20); housing, August (pp. 1–18); union-management cooperation, October (pp. 1–23); industrial research, November (pp. 4–9); and health work, December (pp. 11–20).

General Welfare Activities

THE great majority of labor organizations make provision to assist their members in meeting the calamities of death, illness, or accident. This may be done through the medium of either insurance or what are generally known as trade-union "benefits." The necessities arising from a strike or lockout are usually those first provided for. After that the union may furnish relief in case of death of the member or his wife or in case he becomes incapacitated for work because of injury or sickness. Of these, death is the emergency most often provided for, though sickness and disability also frequently receive assistance. A few unions have even assumed the responsibility of making some provision for the surviving family after a member's death. Some unions pay cash benefits to members found to be suffering from tuberculosis, or pay for their treatment in a sanatorium; others which do not pay benefits for this disease make regular or occasional contributions to private sanatoriums, with the understanding that their members shall be entitled to treatment if needed. Others pay for certain disablements peculiar or common to the trade. Even those labor organizations which have no regular benefits often have a "benevolent" or "relief" fund from which, in special cases, deserving members may receive assistance in times of financial stress. These benefits paid by the international organization are in a great many cases supplemented by similar benefits paid by the locals.

A few organizations provide annuities for members who, by reason of advancing age, illness, or disability, are unable to continue at the trade, and several of the larger international unions also maintain homes for their aged members, the superannuated unionist being given a choice between the pension and residence at the home. Only well-financed unions can afford to pay such benefits, however, for the constantly mounting costs make the burden of a pension system prohibitive for all but the largest and most prosperous organizations.

Since all of these services cost money and all of the revenues of labor organizations must come from the members, it follows that the number and amount of benefits reflect in great measure the prosperity of the trade and consequently of the organization. Everywhere the tendency is toward the expansion and increase of benefits where the funds of the union will warrant. Unions in declining trades or in those suffering from depression, on the other hand, are generally decreasing benefits or abolishing them altogether.

The amounts paid last year in benefits and insurance by 73 international organizations alone totaled nearly $25,000,000. If to this be added the more than $3,000,000 paid in old-age pensions, some half million dollars [1] for maintenance of union homes for the aged, the amounts (not known) paid in unemployment benefits, and the sums paid in benefits by local unions, it is seen that labor organizations are providing a tremendous amount of assistance to their less fortunate members.

The death benefits of individual international unions range in amount from $20 to $1,500, and disability benefits from $50 to $800. The weekly benefits payable in case of sickness range in amount

[1] Four homes only; two just started; one, data not available.

from $4 to $10, and in time from 7 to 16 weeks per year. Old-age pensions paid range from $5 to $70 per month; in cases where the old-age pension is really a lump-sum benefit, not a continuing annuity, the amount ranges from $50 to $800.

Few of the trade-union benefit funds are on an actuarial basis. In the majority of cases a certain amount, estimated as sufficient to cover the expenditure for benefits, is added to the dues; if this proves to be insufficient the assessment is increased. In actual practice many organizations have accumulated in this way funds that will undoubtedly be sufficient to cover any liabilities for benefits. Others have not been so fortunate or have failed to take into account the increasing need for money with the result that they find their funds in a precarious situation as regards future payments. This uncertain stability of benefit funds has led a number of labor organizations either to drastic reorganization of their systems on an actuarial basis or to the substitution for benefits of group or other kinds of insurance.

No attempt has been made in this study to evaluate the financial stability of the funds from which these trade-union benefits are paid. The publications of some of the labor organizations which pay benefits state frankly that the condition of their fund is bad and that if benefits are to be continued the amounts must be decreased or the rate of contribution raised. In a number of instances the union has found the contributions insufficient to cover the increasing cost and has either reduced the benefit or discontinued it altogether. In some cases this was not due entirely to the basis of the scheme itself, but the situation was aggravated by conditions in the industry causing a decrease in members or unemployment among them. The Cigar Makers' International Union is a case in point.

A gradually evolving tendency appears to be the shifting of the responsibility for certain conditions onto the employer. This is especially apparent in connection with the problem of unemployment. Although labor organizations do what they can to prevent loss of employment by their members, exert themselves to find them other positions, and in certain instances either pay cash benefits or excuse payment of dues during the period of enforced idleness, many feel that this is a burden that the industry, not the employees nor their organization, should bear. In some industries, especially the needle trades and the cap industry, the union has been successful in shifting the burden of unemployment either wholly or in part, to the shoulders of the employer. A system of unemployment insurance, the expense of which is borne entirely by the employer has been secured in the cap and felt-hat industries of New York City. For the past five years a contributory system borne equally by employers and workers has been in operation in the men's clothing industry of Chicago.[2] Its extension to the Rochester market has just been incorporated into the new agreement between the clothing manufacturers of that city and the Amalgamated Clothing Workers, while in New York City the provision incorporated into the agreement several years ago now becomes effective and employers' contributions began September 1, 1928. Hereafter in Chicago two-thirds, instead of half, of the expense will be borne by the employers.

[2] Contributory plans have been in effect in the ladies' garment and fur industries but have been lost, at least temporarily.

There are now even a few cases in the street-railway industry in which death or sick benefits, or both, are paid by the employer under the terms of a collective agreement between union and employers. Such benefits have been provided for the employees on the elevated railways of Chicago since 1926; they have recently been extended to the surface lines. In other cases the company provides group life insurance for the employees or contributes to the union benefit funds. There are many instances in which employers provide for such insurance for their workers,[3] but the above are the only cases which have come to the attention of this bureau in which such insurance has been provided under collective agreement with the union.

Not only have labor organizations done their best to improve the economic condition of their members; they have also been active in trying to improve the physical welfare of trade-unionists. The latter problem has been approached from two angles—the workshop and the individual member. Since so large a part of the waking hours of workers is spent in the work places where they are employed, the conditions encountered therein have an important effect upon the general health of the workers. Union insistence has done much toward the improvement of workshop conditions and toward raising the general standard of sanitation, cleanliness, and safety there. It is to-day a common practice to incorporate into collective agreements clauses guaranteeing safe and sanitary conditions. The enforcement of these provisions is usually left to the workers themselves, to a shop chairman, or union representative, or to some agency set up within the industry. A few industries, such as the ladies' garment industry and the pocketbook industry, have made provision for a joint board of sanitary control, composed of equal numbers of representatives of workers and employers, to which is intrusted the duty of insuring the best conditions in the workshops.

Unions in a number of industries, such as the printing trades, garment trades, etc., have cooperated in the making of surveys of the sanitary and safety conditions in the shops, and these surveys have usually included physical examinations of varying numbers of workers to determine what, if any, physical effects had resulted from the working conditions.

Other unions have gone a step farther and are providing certain health services for their members in their capacity as workers. A number of unions carry in their monthly magazines articles on specific diseases or of general interest from a health standpoint, while one or two have a regular health or medical section through which questions are answered and medical advice given. The New York locals of the International Ladies' Garment Workers' Union have since 1919 operated a health center and dental clinic where expert medical and dental service can be obtained by the worker. This example has recently been followed by the Chicago locals of the Amalgamated Clothing Workers, which have opened a dental clinic in their new building; and the Cincinnati locals of this organization provide medical examination and treatment for their members. The Brotherhood of Locomotive Engineers, through study of the data secured by its insurance department, discovered the special

[3] See U. S. Bureau of Labor Statistics, Bul. No. 458, p. 66.

liability of its members to diseases which could have been discovered through a periodic urinalysis. It therefore inaugurated such a service for its members.

Recognizing the value of information relating to causes of sickness and death and being aware of the scarcity of such data, the American Federation of Labor is urging its local unions to cooperate in the collection of information concerning their membership, for study by the United States Public Health Service.

Recreation and Sports

CLOSELY allied to the question of health is that of the provision of healthful recreation, sports, athletics, etc. The value of such activities is quite generally recognized by labor leaders, both because they bring the members together in a social way and so promote the spirit of comradeship, and because of their bearing upon the health of the members. The play spirit of the membership is being encouraged by a great many unions and the result is noticeable in a great variety of both social and recreational lines.

Dances, card parties, banquets, "smokers," entertainments, concerts, plays, and motion pictures are among the indoor social features which bring the members together. Even more widespread and numerous are the sport and athletic activities among trade-unionists. Baseball, bowling, tennis, basket ball, golf, hockey, football, boxing, hiking, and swimming are among the means by which the physical exercise so desirable, especially for workers in confined trades, is obtained. Automobile trips, steamboat and railroad excursions, picnics, and other outings bring together not only the members, but the members' families, increasing the social spirit. A number of labor unions have summer camps and one international even operates an elaborate, year-round vacation resort, provided with facilities for both water and land sports, to which its members as well as those of other unions may go for their vacations at reasonable cost.

Most of the social activities take place within the local unions, though interlocal or interunion events are also common, especially in connection with such sports as baseball, bowling, golf, etc. The advantage of a general gathering place for the various unions of a locality has also been recognized, as attested by the innumerable "labor temples." Many of these are strictly office buildings, but many also contain certain community features—club rooms, reading rooms, auditoriums, billiard rooms, dining halls, etc.—designed to furnish the setting for general social gatherings and for making the labor temple a real center of trade-union life.

Business Enterprises

THE advisability of business ventures by organized labor has been and still is a matter of considerable controversy in the trade-union world. One group is of the opinion that trade-unions should confine their activities to their main field of collective bargaining. This group takes the stand that labor leaders are not qualified as business men, bankers, manufacturers, etc., and assert that the widening of their field to include business enterprises means a division of energies and a dissipation of strength which the labor movement can ill afford.

The other group asserts that there is no field which trade-unions may not properly enter if by so doing they give additional advantages to their members. They grant that no business should be undertaken without previous study of the field and unless it will be of real service either to the members of the individual union or to the labor movement in general. Trained men should be engaged to manage such operations, leaving the officers of the union free to attend to their regular duties but with general oversight of the new business.

The United Mine Workers international is perhaps the leading exponent of the first view, as has been the Brotherhood of Locomotive Engineers of the second.

The businesses engaged in by labor unions have been many and various. This development has mainly taken place since 1920, the year in which the best-known of the labor banks, the Engineers National Bank of Cleveland, was started. The labor banks are probably the best known of these enterprises, but some of the other ventures are equally interesting. The businesses so undertaken include the extension of credit (both for building purposes and for personal uses), investment service, writing of life insurance, the establishment of stores where only union-label goods are for sale, of cooperative stores where the patrons benefit in direct proportion to their patronage of the store, and of mail-order departments in the union organization, the manufacture of bakery goods, washing the members' clothes, and even providing funerals at cost. Others include the manufacture of bricks, cigars, and millwork, mining of coal, farming, running hotels, etc.

In most instances when a labor organization goes into business this is done through an entirely separate business organization. Usually the enterprise is a capital-stock company whose shares are offered for sale to members of the union, but the union itself purchases at least 51 per cent of the stock in order to retain control over the policies of the organization.

Some of these businesses were started frankly for profit, but in the majority of cases there was some other motive than this. In some instances, in trades difficult to organize, the union enterprise was started as an entering wedge to unionism. In other cases the project was relied upon to bring up the level of wages in the trade, to furnish employment for unionists, to increase the bargaining power of the union, to provide additional benefits for members, etc. The following statement, made in connection with one of the industrial enterprises of the Amalgamated Clothing Workers, is descriptive of the purpose of the majority of union business organizations:

> None of [these] has set out simply to make money. They are all organizations subordinated to the major tasks of our movement. They are all parts in the general drive of organized labor to increase its share of power in organized society. The success of such enterprises can not be measured by the yardstick of dividend or increased stock value alone. For they are aiming beyond profits, and it is the "beyond" that really matters. If they are profitable, however, that will be likely to strengthen the confidence of the people in labor's ability to do things. That confidence in itself is a source of strength and power.[4]

[4] The Advance, Apr. 22, 1927, p. 6.

Housing

A NOTEWORTHY field of labor-union activity and one deserving of special mention is that of the financing or actual construction of homes for members. There are to-day eight trade-union home-loan organizations making loans at reasonable rates to unionists to enable them to purchase their own homes.

Actual housing work has thus far been done by only two labor organizations and one group of unionists of various trades. The Amalgamated Clothing Workers has constructed for its members apartment buildings providing living quarters for 303 families, and is planning the erection of others. This is done without profit as an attempt to alleviate to some extent the conditions under which its members lived. A group of union workers in the same city (New York) has also entered the housing field and has erected two blocks of apartment buildings. The tenants in both instances, having acquired the buildings as the result of collective effort, have gone on and are supplying many of their wants also on the cooperative plan, so that they have formed a cooperative community.

The Brotherhood of Locomotive Engineers undertook land development and real-estate activities on a large scale and has been engaged in building a small city in Florida.

General Industrial Questions

NOT only are trade-unions endeavoring to improve the economic and social well-being of their members; they are also beginning to see that they must consider the industry in which their members are employed as well. This realization has led to various manifestations of what has come to be known as "union-management cooperation."

Though the acceptance of this principle is by no means universal, a few outstanding labor organizations are leading the way and unions are now cooperating with employers to improve operating efficiency, to raise the standard of shop sanitation and safety, to improve the quality of output, and to increase the amount produced, to increase the sale of the product, to settle disputes and grievances, and to aid in solving the general and particular problems of the industry.

This preoccupation and interest in the problems of a particular industry has led to a greater interest on the part of labor in general economic questions and the wider industrial problems. This interest has found expression in a number of conferences, held under the auspices of organized labor and participated in by employers, economists, and others, on such subjects as the railroad industry, unemployment, giant power, and the textile industry; and week-end conferences for the discussion of industrial questions.

German Metal Workers' Federation

By FRITZ KUMMER, STUTTGART, GERMANY

PRIOR to the establishment of the German Metal Workers' Federation (*Deutscher Metallarbeiter Verband*) a considerable number of branch organizations existed in different lines of the metal industry, among molders, file cutters, housesmiths, coiners,

engravers, etc. These organizations, although weak in membership, were important in bettering the working conditions of their membership. Yet they suffered from the lack of a national union and absence of uniformity in action and thought. They tried to do away with this deficiency, with varying results. Yet only through a national organization could they completely remove the difficulties. The law against the socialists, which gave the police the right to suppress every workers' club, political or economic, stood in the way, but this was repealed in 1890.

Opinion was divided at the congress of 1891 which considered the matter of establishing the long-desired national organization. There was discussion as to the question of federating on an industrial, instead of a craft basis, as to the desirability of including both skilled and unskilled in the same organization, etc. The question arose as to whether it would not be better for the unity of the metal workers if a national organization for each trade were created first; these national trade organizations might then be federated in some way and perhaps later united into a common, central organization.

The majority of the congress, however, stood emphatically for organizing all occupations into a single industrial organization, and voted accordingly. The idea of industrial organization gained acceptance fairly rapidly. Although some trade-unions believed this impossible of fulfillment and insisted upon their independence, others, one after another, joined the new federation. The advantages of the industrial organization were too great to make it advisable either to fight or to lose them. To be sure, concessions had to be made here and there in order to appease those opposing the connection, but once in the large organization, the scruples against it soon disappeared and the fulfillment of concessions was usually not insisted upon. The advantages of industrial organization were so great that even before federation was complete the disagreement as to the desirability of the industrial form of organization had entirely disappeared.

At its foundation the German Metal Workers' Federation had a membership of 23,000; in the next decade (that is, up to 1922) it reached a peak of 1,642,000; it sank then until 1926, when it was 675,000; and from then on, with the revival of industrial activity and the decline in unemployment, the membership began to rise again. At the turn of the year 1927–28 the membership was 815,000. The increase continued and at the end of the month of October, 1928, the membership was 906,000.

The membership is divided among 604 local groups. There are only 162 of the very small local groups (up to 100 members), and only 5 of the very large groups (with over 20,000 members); 48.64 per cent of the membership is in the 537 local groups with 5,000 members or less, while 51.36 per cent of the membership is in local groups with over 5,000 members. These figures as well as the following represent the situation at the end of the year 1927.

All of the 35 trades in the metal industry are in the federation. Outside of the organization there are, as far as the free socialist trade-union movement is concerned, only two more trade-unions in this industry—those of the coppersmiths and the machinists, of which the first numbers 6,700 and the second 46,300 members.

There are, however, thousands of coppersmiths as well as machinists in the federation, and attempts are now under way to bring both of these unaffiliated trade-unions into the "big brother" organization. Sooner or later these last two independent organizations in the industry will also be included in the industrial organization.

Among the 35 trades which are united in the German Metal Workers' Federation, the housesmiths form by far the largest group with a total of 184,000 members; the second strongest, lathe turners, follows with 71,000; the two smallest trades are those of the goldsmiths, with 1,142, and tin founders, with only 220 members. The group of woman workers numbers 57,300, the apprentices, 30,700 members. In addition, the federation includes skilled and unskilled workers, besides those who neither produce nor manufacture any metal but are employed in the industry as painters, journeymen, masons, glass blowers, etc. The following statement gives information as to the relative importance of these groups:

		1913	1927
Skilled	per cent	72. 77	68. 28
Unskilled	do	21. 20	22. 80
Women	do	5. 02	7. 02
Workers other than metal	do	1. 01	1. 90

As in other countries, jurisdictional disagreements arise in the German trade-union movement as to what association this or that factory, this or that occupation, belongs. Yet such differences are comparatively infrequent in Anglo-Saxon countries; they are generally peacefully and amicably arranged by the trade-unions concerned and only in exceptional cases must a congress occupy itself with them. One is justified in assuming that these controversial questions will soon belong to the past. Standards set up by the congress of the German federation of 1925 for dealing with disagreements as to organization limits and the effort to amalgamate related trade organizations are conducive to independent settlement.

Contributions and Relief

AN ORGANIZATION made up of all the workers in an industry, from the highest-paid mechanic to the lowest-paid woman worker and apprentice, can not get along with a single class of dues even though the pressure towards simplification is always very strong. For that reason five classes of dues payers have been created: Male members over 21 years old (weekly dues 1 mark); male members between 18 and 20 years old and highly paid female workers (0.75 mark); female members over 20 and unskilled males from 16 to 20 years old (0.50 mark); male members under 20 years old (0.30 mark); and apprentices and invalids (0.10 mark). The dues shown are only the weekly basic contributions, which are increased by local dues. Of the basic dues, 20 per cent remains in the local groups to cover local administration and other obligations. As the 20 per cent is almost never sufficient, the local groups are allowed to collect an additional weekly fee. According to the local needs this fee fluctuates between 0.05 and 0.30 mark per week. Of 604 local unions, 505, with 750,000 members, avail themselves of the right of collecting a local fee. With more than 58 per cent of this membership it amounts to from 0.20 to 0.30 mark a week.

Out of the 80 per cent of the basic dues which must be turned over to the national treasury, the treasury pays for seven relief systems: (1) Strike benefits, (2) disciplinary fines incurred, (3) unemployment benefits, (4) relief in cases of need, (5) travel (or moving) benefits, (6) death benefits, and (7) legal protection in lawsuits arising out of labor disputes, out of trade-union activity, or in connection with the State social insurance system. These relief funds are graded according to the dues class of the member and the length of his membership. The major share of the relief contributions is received by the first class of dues payers, which includes 64.4 per cent of the total membership. For all forms of relief a total of 11,729,000 marks was expended in the year 1927. Of that amount, in this year of great unemployment, 8,313,000 marks was used for relief of those without income because of unemployment and sickness, while for strike relief only 2,545,000 marks was disbursed.

The total income of the national treasury, including the balance from the foregoing year, 1926, amounted to 37,400,000 marks, of which 30,300,000 came from membership dues and initiation fees. Expenditures amounted to 36,300,000 marks, relief forming by far the greatest item of expense. The next greatest item of expense was the press, for which 844,000 marks was spent. The federation has three newspapers: The weekly Metal Worker Paper (*Metallarbeiter-Zeitung*) and Young People's Paper (*Jugend-Zeitung*) and the bimonthly Works Council Journal (*Betriebsräte-Zeitschrift*). The first-mentioned (published in an edition of 910,000) is distributed free to all members; the Jugend-Zeitung, which has 70,000 copies, is received only by the young people. The Betriebsräte-Zeitschrift deals only with theoretical and practical lessons for the officials of the federation in the factory and in the organization. In it attention is especially directed to legal questions of the works council. For this organ a small fee is charged, which is often paid from the treasury of the local group.

Education of Officers and Members

IN ADDITION to the above, many leaflets, brochures, and books are printed by the federation for the members, besides periodic notes on developments in world commerce and social legislation. In the headquarters of the federation there are special departments which follow the course of world economics, social legislation, and especially the condition of the metal industry of all countries. The results of their activities are made accessible to the members through memoranda so that they or their officers may be prepared for wage negotiations and for propaganda. No matter how successful education of the membership through the press may be, it is not sufficient in itself. To make up for the inadequacy, young and intellectually alert members are each year sent to different courses of instruction and to trade-union schools. The school fees as well as the loss in wages are covered by the treasury of the federation. The union has for some time had its own school to which about 50 members are always sent. In order to make the members familiar with the economic and vocational peculiarities of their trade the participants in a course are always chosen from one trade. As each course lasts only a few weeks, 10 different trades may come to the school in one year.

In addition to the usual courses for working members in the workshop, courses are held for functionaries and salaried officers of the federation in order to educate them for their particular duties. Treasurers of locals, for instance, are called together in groups in order to give them practice in treasury business or the management of newer relief systems or to make clear to them how accounts should be revised. Acknowledged experts act as teachers in all these courses. In the school of the federation a lawyer works beside the different experts. At the same time, as an authority on social legislation, he takes upon himself the representation of members before the courts. During the entire period of a course the participants are lodged and furnished board at the expense of the federation. The best students in each course are then given a longer course, lasting three months, in order that they may have a thorough education in all problems that may arise in connection with the activity of a trade-union official. Among all the German trade-unions, the Metal Workers' Federation is preeminent in creating a strong economic, socio-political and trade-union organization of well-trained members, in order that vacancies arising through the transfer of officers to the service of the State, the community or the social insurance system may be filled at once, and also to take care of the greater volume of work which the increase in membership brings. The federation, which is unusually closely tied up with economic and socio-political affairs, naturally has a lively interest in seeing that only the most able of its officers enter the public service. Incident to this transfer system, an equally urgent and costly duty arises. It is that of training able members for the places left open by officers who are withdrawn. The number of full-time salaried officers, including 8 members of the board of directors and 2 editors, is 1,002. Of these, 79 are engaged in the main office. This total does not include persons in the two printing offices of the federation (in Stuttgart and Berlin). The federation also has many thousands of functionaries in local groups and in factories who work mostly without pay or are paid only for unusual activity. In 1927, for the full-time salaried officers and assistants of the main office and local groups 5,729,000 marks were expended, and for school and other educational purposes 535,000 marks.

Congress of the Federation

THE federation holds its congress every two years. In 1928 the congress was held at Karlsruhe. It was well attended as are all congresses of the federation, which is the largest trade-union in the world. The International Metal Workers' Union, to which the International Association of Machinists of the United States of America also belongs, sent many delegations. The State government and the community council of the city of Karlsruhe were represented—the State by a minister and the city by its mayor, both of whom are members of the union. The membership was represented by 264 chosen delegates and 46 representatives who were present by virtue of their official positions (members of the directorate, editors, and district leaders).

At the congresses of all German trade-unions, and also at those of the German Metal Workers' Federation, the activities of the directorate are always widely discussed. That was also the case at Karls-

ruhe, arbitration being an especially important topic. This controversial question had been discussed in advance at large meetings and also in the metal workers' paper. At the congress itself, it was possible to deal with the subject only to the extent of expressing the position in words. Settlement of disagreements between manufacturers and workers in Germany through an arbitration board, when both parties can not come to an agreement themselves, is a common practice. The arbitration boards are made up of equal numbers of representatives from the employers' organization and from the union, with a chairman, appointed by the Government, who is the official mediator. When the mediator's efforts to unite the parties are fruitless, he is called on to make independent awards. If an award is not accepted the Minister of Labor may, in a case of general importance, declare the award binding. An award thus made becomes law for both parties, and disregard of it makes the offender liable for any resulting damage to the other party. In one case the federation had to indemnify an employer organization, because members of the federation failed to observe the terms of a binding award.

The large majority of members of the federation are agreed as to the need and usefulness of arbitration. The disagreement begins when a decree is made binding. Although, in proportion to the total, the number of awards declared binding is very small, a part of the membership considers even this small number harmful to the workers; these members feel that a forced settlement should take place only in trades or occupations that are far behind the general average in wages and other working conditions or where the trade-union organization is so weak that the worker has no prospect of securing better working conditions.

On this matter the congress finally took a position essentially as follows:

> The declaration of binding awards must remain limited to cases of the highest interest to all. They are especially inadmissible when both parties to the award object, even if on opposing grounds. Direct action to remove the arbitration order can not be countenanced by the congress. Amelioration is to be striven for energetically.

By far the most important concern before the congress was the introduction of trade-union superannuation insurance. In Germany every worker, man or woman, is insured by law against sickness and old age, and contributions for this purpose are deducted from wages by employers. The State sickness relief is paid, according to the rule, only at age 65, and is so small that it hardly defrays the cost of living. The inadequacy of State superannuation relief has been especially evident in the past two years when, owing to the introduction of scientific management in production, a vast number of workers have been dismissed who will not reach the age limit for relief for a long time and who have little or no chance to look ahead to a regular occupation. Therefore the members of trade-unions wish to introduce this insurance so that in old age or during long periods of unemployment for any reason the worker may have some assistance.

The directorate received strict instructions from the 1926 congress to go into the matter thoroughly and if possible to work out a plan. That has been done. The plan of the directorate makes insurance compulsory for all male members of the first three dues-paying classes,

and voluntary for all female members. The highest classes of insurance amount to 480, 408, and 324 marks a year for the three dues-paying classes, and for this purpose an addition to the weekly dues of 0.30, 0.25, and 0.20 marks is paid. This surplus will be reserved exclusively for insurance. Relief will be granted during incapacity to work, whether caused by old age, sickness, or accident. The old members of the federation, who joined in 1891, will receive relief after a year, at the highest rate, and for the younger members equally noteworthy privileges are looked for. This plan was adopted with a large majority. The new relief will go into effect at the beginning of the year 1929.

When the international relations of the federation and of the congress of the German Federation of Labor came up for consideration, the situation of the Red International Trade Union and the agitation of the communists were discussed. At this point of the day's business, the communist delegates made several motions asking that the directors of the federation institute a world congress of reds and of the Amsterdam International, and that they receive the Russian Metal Workers' Union. The communists were fairly numerous in the metal workers' federation at the time of the economic and political confusion in Germany, but since then they have diminished in numbers and influence, and their delegates now constitute only a fraction of earlier delegations. The communist proposals found no support outside the communist delegation. The overwhelming majority of the German trade-union members, including the metal workers, strongly oppose the communists. The ground for opposition is contained in the following resolution, which was adopted by a large majority:

> The congress condemns sharply the monstrous injury to trade-unions done by the International Communist Trade Union and the challenge of the communist members, especially in Germany, France, and England, to disorganize the trade-unions. The congress charges its directors to use their influence against every effort of the International Communist Trade Union.

Finally, it should be mentioned that the congress voted to remove the headquarters of the German Metal Workers' Federation from Stuttgart to Berlin. The removal was desirable even before the war, but due to the war and its results it has not been possible to make the move. Since 1918 the economic and political center has moved more and more toward the German capital, making it most undesirable that the largest trades-union, which is also most closely connected with economic and political questions, should be 400 miles from Berlin. So, finally, the long-recognized necessity is being met. In the course of the next two years the move to Berlin will be made.[1]

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[1] EDITOR'S NOTE.—Subsequent to the writing of this article a lockout, involving some 250,000 workers in the German heavy-metal-working trades, has developed. The lockout followed a compulsory award increasing wages and makes employers liable to fine. The award was made as of Oct. 31, 1928, to take effect on the following day. After appeal to the labor courts and before the points at issue were passed upon by the higher court, the parties agreed voluntarily to submit the dispute to arbitration. See article on page 116 of this issue.

LABOR TURNOVER

A Comparison of Labor Turnover Among Men and Women in Two Large Chicago Companies

By Thomas Wesley Rogers, Drake University

SINCE women have come to play such a large part in the economic life of the United States, interest in their efficiency as compared with that of men has been increasing. The writer had the opportunity during the first few months of 1928 to make a limited survey of labor turnover in two Chicago industries which revealed some interesting data relative to the comparative percentages of turnover among men and women. Since turnover is regarded by many as one of the indexes of efficiency, these findings may be of interest. The data presented were compiled from the records of two large firms and cover the years 1926 and 1927. These establishments have well-organized personnel departments and carry on an extensive program which includes sick benefits, medical service, group insurance, pension plan, etc. The labor policy of these plants is practically the same, both being operated on an open-shop basis, and there being no independent labor organization among their employees.

The conditions under which the employees of these concerns work are fairly comparable, when allowance is made for the usual differences between occupations within the same plant or organization, and between organizations of the same general type. All employees of concern A are housed within the same plant and are subjected to the same general supervision. In concern B all employees come under the same general management or supervision, but they are housed in buildings located in different parts of the city. In a large percentage of the departments within the plants of these concerns, men and women are engaged in similar occupations. Practically all departments of both plants employ both sexes.

Because of the approximate equality of the total number of men and women employed by these concerns, and because of the conditions already noted, a comparison of the turnover rates of the two sexes can be made upon a fairly equitable basis. The following table shows the average total number of men and women employed by these two concerns, the number leaving, and the rate of turnover,[1] for the years 1926 and 1927:

Table 1.—AVERAGE NUMBER ON PAY ROLL, NUMBER OF SEPARATIONS, AND RATE OF TURNOVER, 1926 AND 1927, BY SEX

Sex	1926			1927		
	Average number on pay roll	Number of separations	Rate of turnover	Average number on pay roll	Number of separations	Rate of turnover
			Per cent			*Per cent*
Men	28,268	11,556	40.88	26,970	8,460	31.36
Women	27,730	14,616	52.70	26,176	11,950	45.65
Total	55,998	26,172	46.74	53,146	20,410	38.40

[1] Separations divided by average number on pay roll.

The number hired was as follows:

	1926	1927
Men	14, 373	4, 927
Women	15, 942	9, 456

These figures show that the turnover in 1926 among men was 40.88 per cent and that among women for the same year it was 52.70 per cent. The women employed formed 49.52 per cent of the whole force in 1926 and 49.25 per cent in 1927. It is to be noted from these percentages of aggregate turnover that the turnover rate among women was 11.82 per cent higher in 1926 than that of men for the same year, and that in 1927 the rate for women was higher by 14.29 per cent. These percentages show clearly a tendency toward a higher aggregate turnover among women than men.

This tendency, however, is modified by the divergence of the percentages of the total number of both men and women employed by each of the two concerns. In 1926, company A employed 69.84 per cent of the average total number of women shown in Table 1, and in 1927 employed 73.42 per cent. This, of course, leaves the remaining portions to company B. In 1926 company A employed 32.18 per cent of the total number of the men and company B 67.82 per cent; in 1927 these percentages were 36.22 per cent and 63.78 per cent, respectively. There is also some variation of the turnover rate between the two plants as regards the men, likewise as regards the women. The turnover rate among men in company A was 31.70 per cent in 1926 and 23.25 per cent in 1927, while the rates for the women were 55.68 and 42.78 per cent, respectively. For company B the rate of turnover for the men was 45.26 per cent in 1926 and 35.98 per cent in 1927, and for the women 46.06 and 42.78 per cent.

A study of the "reasons for leaving" affords some interesting bits of information. Table 2 shows the number in each of the two years who left of their own accord, who were laid off, and who were discharged. The table shows that, in 1926, 83.58 per cent of the men and 85.71 per cent of the women who left did so of their own accord; in 1927 the percentages were 59.18 and 75.42 per cent, respectively. The reduction in this class from 1926 to 1927 was largely due to the laying off of men at the plant of company B.

TABLE 2.—NUMBER LAID OFF, NUMBER LEAVING VOLUNTARILY, AND NUMBER DISCHARGED, 1926 AND 1927, BY SEX

Reason	1926				1927			
	Total number leaving		Per cent of total separations		Total number leaving		Per cent of total separations	
	Men	Women	Men	Women	Men	Women	Men	Women
Left of own accord	9, 658	12, 527	83. 58	85. 71	5, 007	9, 012	59. 18	75. 42
Laid off	368	264	3. 18	1. 80	2, 445	1, 589	28. 90	13. 29
Discharged	1, 530	1, 825	13. 24	12. 49	1, 008	1, 349	11. 92	11. 29
Total	11, 556	14, 616	100. 00	100. 00	8, 460	11, 950	100. 00	100. 00

Of the total number of men leaving during 1926, 3.18 per cent were laid off. The percentage laid off among women for this year was 1.8.

For the year 1927 the percentages were 28.90 and 13.29, respectively. Business inactivity is reflected in the decided increase in lay-off in 1927. The per cent discharged remained approximately the same from one year to the next and were not affected to any great degree by changes in business conditions. It may be noted that approximately the same percentages of men and women were discharged in each year.

Labor Turnover in American Factories

AS COMPARED with the first half of 1927, the first six months of 1928 showed less industrial activity, as indicated by lower accession and quit rates. Beginning with July, 1928, both of these rates have been higher, month by month, than in the corresponding portions of 1927. It is also noteworthy that this year, for the first time since 1922, the October accession rate, 57.1 per cent (equivalent annual basis) exceeded that of September, when the rate was 56.9 per cent. In 1927 it dropped from 43.6 per cent in September to 40.8 per cent the following month. Discharges in recent months have been fairly constant, amounting to 5.3 per cent during August, September, and October and 4.9 per cent in November.

AVERAGE TURNOVER RATES DURING 1927 AND 1928 IN SELECTED AMERICAN FACTORIES [1]

[Each month's rates are stated on an equivalent annual basis]

Month	Accession rate		Total separation rate [2]		Voluntary quit rate		Lay-off rate [3]		Discharge rate [3]	
	1927	1928	1927	1928	1927	1928	1927	1928	1927	1928
January	36.3	33.4	40.8	27.8	23.1	15.7	12.3	8.5	5.4	3.6
February	41.7	31.6	36.9	27.6	21.8	15.1	9.6	7.9	5.5	4.6
March	43.2	35.9	42.5	32.8	29.8	20.1	6.4	8.4	6.3	4.3
April	47.5	40.0	48.3	38.2	32.4	26.0	9.7	7.1	6.2	5.1
May	48.0	47.2	44.7	41.5	31.9	28.2	7.6	8.3	5.2	5.0
June	45.0	41.3	43.9	39.5	29.1	27.1	8.0	7.5	6.8	4.9
July	37.8	46.9	35.7	38.0	24.4	27.2	6.0	5.9	5.3	4.9
August	39.6	55.7	36.4	42.3	23.0	31.9	8.5	5.1	4.9	5.3
September	43.6	56.9	46.2	50.6	33.8	40.3	6.4	5.0	6.0	5.3
October	40.8	57.1	39.6	41.9	25.3	31.9	8.5	4.7	5.8	5.3
November	31.6	[4] 46.4	31.5	[4] 35.5	18.0	[4] 26.5	9.3	[4] 4.1	4.2	[4] 4.9
December	23.7	-------	27.2	-------	14.8	-------	8.6	-------	3.8	-------

[1] Now numbering over 300. The form of average used is the unweighted median of company rates, except for the total separation rate, which is the sum of the median rates for voluntary quits, lay-offs, and discharges.

[2] Arithmetic sum of quit, lay-off, and discharge rates.

[3] The Policyholders' Service Bureau of the Metropolitan Life Insurance Co., the compiler of these quarterly tables, calls attention to the fact that in the August statement, published in the October Labor Review, there was a transposition of the data in the 1928 columns for lay-off rates and discharge rates. This is here corrected.

[4] Preliminary; subject to revision.

INDUSTRIAL RELATIONS AND LABOR CONDITIONS

Recommendations of Secretary of Labor for Extending the Work of the Department

AMONG the recommendations made by the Secretary of Labor in his 1928 report are the following, listed under the service, bureau, or office concerned:

United States Employment Service.—Each State should form a unit in the operation of a public employment service. The Federal Government should have a share of the responsibility and burden of such service.

According to a recent decision of the Supreme Court, State authority can not regulate the fees of private employment offices. This is a challenge to public employment offices to broaden their scope and improve this service. Increased appropriation should be made for the purpose by Federal and State Governments.

Bureau of Labor Statistics.—Another family budgetary study should be made to supersede the 1918 investigation.

Better cooperation with nongovernmental agencies is requisite for the establishment of a sound basis for a labor turnover index by industries.

A careful survey of migratory labor in California, Oregon, and Washington would be of value not only to these States but to other States to which seasonal labor is a problem.

Congress should repeal the clause in the organic law of Hawaii requiring the United States Commissioner of Labor Statistics to make quinquennial investigations in that Territory or should make a special appropriation for such investigation.

With the appropriation of $100,000 authorized by Congress last May, the Bureau of Labor Statistics is now carrying forward rapidly the enlarging of its work on employment returns and the study of methods for securing accurate unemployment statistics. The Secretary emphasizes the importance of continuing this work.

The States should make the United States Department of Labor a clearing house for industrial accident statistics.

> It is time we sincerely asked ourselves, "Are we or are we not interested in the death and mutilation of our working people?" Our individual answers are in the affirmative, but action by States and the Federal Congress is required if we are to do anything worth while to prove that interest. It is high time that something constructive was done about it.

Bureau of Immigration.—A redraft of the quota act is favored. Some of the desired amendments have already been embodied in Senate bill 3019 of the last Congress, among them—

> 1. The provision fixing an exact number of immigrants who may enter the United States annually from all sources, instead of from certain countries only as under our present system.
>
> 2. The provision under which a considerable part of our immigration could be selected with a view to meeting the needs of agriculture, industry, and other activities in the United States.

Other proposed provisions indorsed by the Secretary of Labor include immigration visas to families as units and a nonquota status for "the unmarried child under 18 years of age, or the wife of an alien who was legally admitted to the United States for permanent residence prior to July 1, 1924, and who has continued to reside therein."

The Secretary also holds that "the protection of our labor will not be complete until quota restrictions in some form are applied to the countries of the Western Hemisphere."

The examination of aliens on the larger steamers en route to the United States instead of at American ports is suggested.

Border crossings have multiplied as new means of communication have been established. The increasing use of airplanes present special problems for border officials. It is imperative that in the early stages of air transportation "definite and well-considered plans be laid by those governmental agencies which are concerned with the entry of people and merchandise." No effort should be spared "to facilitate the inspection and clearance of planes."

Bureau of Naturalization.—At present only aliens who arrived in this country after June 29, 1906, are required to have certificates of arrival. Such a certificate should be required for all applicants for citizenship, regardless of the date of their entry.

Legislation should be promptly enacted providing for the issuance of citizen certificates to those whose citizenship has been derived from the naturalization of others.

Various other recommendations are made, among them one for an alien census or enrollment.

Attention is again called to the importance of authorizing an analysis and collation of the valuable information in the records of the Bureau of Naturalization.

Children's Bureau.—The development of antisocial tendencies in children demands continuing scientific research along these lines. Delay in making it possible for this bureau to employ the required experts for this work is expensive economy.

The collection and publication of national statistics concerning children should be extended. "We do not know the facts about dependent, delinquent, feeble-minded, or crippled children or the number of boys and girls who go to work."

Marked progress is reported in Federal provision for children in the District of Columbia. Among the forward steps within the last few years are the enactment of a mother's pension law, the centralization of the care of neglected, dependent, and delinquent children in the children's division of the public welfare department, the raising of the child-labor-law standards, improvement in the machinery for the enforcement of such law, and provision for the detention of children at the public welfare department.

It is to be hoped that Congress will find it possible to round out this program by more adequate provision for prenatal and infant care by the health department and the publicly maintained hospital and by making available, to the juvenile court and to the truancy department of the schools, psychiatric clinics to assist in the diagnosis and treatment of maladjusted children and thus to promote the reduction of delinquency and crime.

No provision has been made by the Federal Government for modern care for children who violate Federal statutes. While the Federal courts may now place offenders on probation, "the old methods of

indictment by grand jury, imprisonment while awaiting trial, and punishment of children still obtain. Either provision should be made for the filing of information against these children in the State juvenile courts or authority for informal hearings in a chancery court—with the object of treatment and not of punishment—should be given the Federal courts."

Women's Bureau.—A comprehensive scientific investigation of women's employment in establishments using poisonous substances should no longer be postponed. Specially trained experts are required for such a survey.

A scientific study of the advantages and disadvantages of the piecework system should be made.

Accurate information on the gainful employment of married women is greatly needed and also an unprejudiced presentation of the facts in the matter.

The problem of women's posture at work should be taken up. The Association of Governmental Officials in Industry of the United States and Canada and a number of firms have requested the Women's Bureau to make such a study.

Many States in their published statistics on wage earners do not separate them by sex or even by age, while in other States' statistics minors are included with adult women. State labor offices would render an important service in the line of social statistics by publishing their figures for wage earners by sex and age—always separating those under 16 years of age from the more mature workers. Indeed, the separate presentation of another group—those 16 and under 18 years of age—would be of interest and value. The standard reporting of other State labor statistics is also "highly desirable."

Conclusion

AFTER making his recommendations the Secretary discusses at some length the progress of the workers from ancient times to the days of mass production, and states that the difference between our own period and all preceding eras "is found largely in the fact that labor now shares in desires that were formerly regarded as aristocratic." He holds that economic progress is dependent primarily upon two things: First, the creation of a multiplicity of wants; and, second, the enlargement of the class which shares the multiplicity.

> Even high wages will not accomplish all that they are capable of accomplishing if the hours of labor are so long that the worker has little or no time for recreation. A leisure class has ever been regarded as a necessity to society, because it is only the man or woman possessing leisure who has the time to gratify a multiplicity of wants. It is the leisure to think that makes men and women thoughtful; and much of the leisure that has belonged to the aristocracies of the past must now be appropriated by the masses who earn their living by means of manual labor or attendance on a machine.

Machines can not be overefficient if they increase our general prosperity, but we shall be purchasing prosperity for a few at a high price "if machines become so efficient as to impoverish the many by keeping them unemployed."

In closing his report the Secretary declares that progressive American business men acknowledge what must in time be universally acknowledged, that the workers have the same right to prosper as

their employers and that according to sound economic teaching the day has arrived when the prosperity of both is dependent upon "the sound financial status of the former."

Working Conditions of Journalists in Various Countries

THE working conditions of journalists form the subject of a recent report of the International Labor Office.[1] The study was undertaken at the request of the International Association of Journalists accredited to the League of Nations, which pointed out the importance and value to journalists of such an investigation. The report takes up the general aspect, composition, and organization of the profession, the status proper of the journalist and his conditions of work, the state of the labor market, and the insurance institutions established for journalists in various countries.

The profession of journalism varies in importance in different countries. The degree of specialization is also unequal, journalism in Europe being a much less highly specialized occupation than in the United States, where the industrialization of the newspaper and the division of work have gone far. Amateurism is declining and the papers which use copy of nonprofessionals are becoming fewer in number. The use of gratuitous copy is also declining and is even prohibited in some collective agreements between publishers and journalists. Often the major part of the text of a great daily paper is written by paid collaborators.

In Austria, Germany, Hungary, Italy, Sweden, and Switzerland journalism may be considered a full-time profession, while spare-time journalists are common in France, Luxemburg, Portugal, and Spain.

Women are not numerous in the journalistic profession and where engaged in it they usually specialize in fashions, health, domestic economy, and feminism, and sometimes in literary and art criticism, although in the United States they do some reporting, and, according to the 1920 census, formed 16.7 per cent of all persons engaged in editorial and reporting work. Their working conditions are usually the same as those of men, but in Germany, Greece, Italy, and the United States they are sometimes not so well paid.

Organization

THE tendency toward organization for the protection of economic and social interests has been more pronounced in journalism than in other brain-work professions, according to the report, which states that "one is struck, in reading certain bulletins of national associations of journalists, with the resemblance which exists between the aspect and tone of these organs and those of the industrial workers."

In a general way and taking into account many peculiarly national circumstances, the development of trade-union principles was effected parallel with the transformation of the press and the constitution of a sharply defined professional journalism. As the great daily press developed and the journalistic profession

[1] International Labor Office. Studies and reports, series L (professional workers), No. 2: Conditions of Work and Life of Journalists. Geneva, 1928.

assumed a more and more definite form, the press associations, which were purely idealist to begin with, were gradually penetrated by a spirit of professional solidarity which, under the influence of increasing material difficulties, changed into a definite determination to fight in self-defense.

Four countries were in the van of the movement—Austria, Germany, Great Britain, and Italy—and the start which they gained still confers on them a position of the highest importance. The trade-union activity of the journalists of these countries is frequently held up by their colleagues in other countries as a model of professional defense.

Various kinds of associations were found to exist in the different countries. Some of them, referred to as "friendly unions" in the report, are intended "to create simple bonds of comradeship and to furnish means of distraction or of culture," and accept as members all those who have any connection with the press—writers, managers, and owners—as well as those having no connection with it, or only occasional relationships. When the aims of the organization are merely mutual aid and welfare, membership is usually open to the entire journalistic world and to rich philanthropists as well. When the union takes the form of a professional weapon, its membership is more exclusive. Some of the associations were found to have "a considerable administrative organization with information, propaganda, and legal departments," and to publish an official organ containing news of the organization and other matters.

The process of international unionization of journalists has been facilitated by the similarity of their situations and interests in the various countries, and the international organization of journalists, according to the International Labor Office, represents a "concentration of forces without equal in the intellectual world. There are elsewhere organizations with a larger membership, but there are none more coherent by reason of their internal constitution and better prepared for action by the conciseness of their program."

Settlement of Disputes

IN THE settlement of their professional disputes journalists tend to avoid recourse to the ordinary courts. In this connection the report states:

* * * When they have not been able to obtain a special jurisdiction, their organizations endeavor to settle conflicts in a friendly way in conformity with the usages of the profession, and thus try to spare the person concerned the expenses, which are often considerable, and the delays of the ordinary civil procedure. Wherever the establishment of a collective régime has furnished them with an opportunity, they have not failed to institute arbitral commissions or special professional courts (*tribunaux prud'hommaux*) either permanent or constituted for each particular case. These courts are generally established on a joint basis. Their members, nominated in equal numbers by the journalists and the employers, usually elect a president whom the contracts are careful to require to be independent, and frequently a lawyer by profession.

It is said that this system of arbitration and special jurisdictions has appeared to give excellent results in the countries in which it has been instituted and that the journalists are attempting to get it adopted everywhere.

Working Hours

HOURS of work of journalists are regulated by law only in Czechoslovakia, Luxemburg, and the Union of Socialist Soviet Republics. In Czechoslovakia the normal working-day in the editorial

offices is fixed at eight hours although it is often shorter; in Luxemburg at eight, but in practice rarely exceeding six; and in Soviet Russia at eight for daily and weekly papers, and at six for magazines, or official or semiofficial papers not for public sale. In regard to the latter country the report states that "it does not seem that these measures are strictly carried out with regard to daily and weekly papers." In Australia, Austria (Viennese press), Germany, Great Britain, and Sweden, the hours of all or of a part of the journalists are regulated by collective agreements. No country, according to the report, has such minute regulations on the subject as Australia. In the countries for which the working hours are mentioned, including those having legal or contractual regulations, the most common working-day consists of from six to eight hours.

Regulation of the duration of night work was found in only three of the countries studied—Australia, Austria, and Great Britain—where collective agreements contain clauses regarding it, although in Great Britain the hours of work of the night staffs of the big London papers only are mentioned as being fixed by collective agreement. In a number of countries a higher rate is paid for night work. In Czechoslovakia the agreements generally provide for an additional holiday of one week for journalists on the night staffs.

The weekly day of rest is practically universal and usually falls on Sunday. In some countries it is provided for by the general laws on the subject and in others by specific legislation applying to the profession. In Italy Sunday rest is secured through a royal decree providing that "in no printing works shall the work of printing any kind of periodicals be begun between 6 a. m. on Sunday and 6 a. m. on Monday." Similarly in Spain an order prohibits newspapers from appearing on Sunday evening or Monday morning. In France an act of July, 1925, extending the provisions of the general legislation on weekly rest to "the personnel employed on editorial work in newspaper undertakings or news agencies" is said to be the "first event of a legal order affecting the working conditions of journalists in France."

Vacations and Sick Leave

THE granting of annual vacations seems to be universal, the practice being governed by custom in some cases, by collective agreement in others, and by law in a number of instances. The time allowed varies in the different countries studied from a minimum of six days in one country to a month and a half in two others, the period usually being based on length of service.

Often very generous time allowances are made for illness, in a number of countries amounting to several months with full pay. In some instances provision is made for additional leave with part pay. In Australia, under the collective agreement every journalist is entitled to sick leave as follows: For less than six months' service, one week with full pay, one week with half pay, and a third week with quarter pay; after six months' service, four weeks with full pay, four weeks with half pay, and four weeks with quarter pay. Absences for illness, however, are added up for the year and are not considered separately. The collective agreement obtained by the Organization of the Viennese Press in 1923 provides that every

journalist after five years' service in the same undertaking is entitled to four months' sick leave with full pay and an additional month under the same conditions for each year of service above five, up to a maximum of 12 months. In Italy, three months' leave with full pay and three additional months with half pay are provided by the collective agreement.

Regulation of Dismissal

INSECURITY of position is one of the greatest disadvantages of the journalistic profession, since the possibility of dismissal is always present due to the vicissitudes connected with the publishing business. To protect themselves as much as possible against the risks of sudden dismissal, journalists have tried to obtain the longest possible term of notice of dismissal together with the granting of indemnities. In the countries in which no legal or contractual regulation of the working conditions of journalists exists, the solution of this problem is left to friendly arrangements or to the decisions of the courts, but in those countries in which journalists have obtained collective agreements regulating their working conditions the agreements contain detailed provisions dealing with this matter. These collective agreements have established universally the principle that notice of dismissal must be given by the party desiring to annul the contract and provide that the notice shall be fairly long, and usually that it be proportional to the length of service. An outstanding example of the regulation of dismissals is found in Austria where the law provides that the written contract with which every writer is furnished when he takes employment shall contain express mention of the notice of dismissal, which must coincide with the end of a quarter and be for not less than three months (six months in case of the closing down of the undertaking). After five years' service the notice is increased by one month for each year of employment, up to a maximum of 12 months.

Some agreements provide for additional compensation for dismissal, also proportional to the length of service. In Italy, where the regulation of journalism and other intellectual pursuits prevails to a greater extent than in any other country, the following indemnities are provided by collective agreement, in case of "breach of a contract not provoked by a culpable act on the part of the journalist":

(1) One year's pay to directors and assistant directors.

(2) Nine months' pay to editors and the titular Rome correspondents.

(3) Six months' pay to ordinary journalists, foreign correspondents, stenographers, reporters, regular outside contributors, and artists.

In addition to these fixed indemnities the employees mentioned receive an amount equal to one month's pay for every year or fraction of a year of service.

Collective agreements also contain detailed provisions covering the resignation of a journalist because he can no longer conscientiously work for an employer. It is reported that on some occasions the signatories to collective agreements insure to the journalist resigning for reasons of conscience more favorable conditions than to a dismissed one and grant him a larger indemnity, holding that he suffers more serious damage than the dismissed employee.

Labor Requirements and Costs in Harvesting Grain Sorghums

A COMPARISON of labor requirements for different methods of harvesting grain sorghums is contained in a recent pamphlet of the United States Department of Agriculture.[1]

It was found that a man with a team and wagon will head by hand and dump in ricks an average of about 1.8 acres, or 35 bushels, of grain sorghum per day from fields yielding 20 bushels per acre. The average cost of harvesting by hand is about $2 an acre, or 10 cents a bushel, where the labor is hired, allowing $2.75 per day for man labor and 40 cents for horse labor. The cost of threshing hand-headed millo is about 4 or 5 cents per bushel in addition.

With a row binder (corn binder) a man with a 3-horse or 4-horse team can harvest an average of seven acres a day, and one man can shock five acres of bound grain sorghum a day. Figuring the cost of man labor at $2.75 per day and horse labor at 40 cents, the average cost of harvesting with a row binder and shocking the bundles is about $1.20 per acre, equal to a cost of 6 cents a bushel on a yield of 20 bushels to the acre.

Next to hand heading, the most common method of harvesting grain sorghums which are to be threshed is by the use of the grain header. A crew of two men with a header can harvest and rick an average of about 13 acres per day. Where both man and horse labor are hired, the average cost of harvesting with a header and two men is about 70 cents an acre, the cost per bushel being 3½ cents for a yield of 20 bushels to the acre. The cost of threshing grain sorghums cut by this method is 6 to 7 cents per bushel with a custom thresher, or a total cost for harvesting and threshing of about 10 cents a bushel where hired labor is used.

Combining is the latest method of harvesting grain sorghums and its use is reported to be increasing rapidly in spite of certain mechanical limitations. A 15-foot combine will cut an average of 2½ acres an hour, or 20 to 25 acres per day. The cost of labor, power, and fuel for harvesting and threshing with a tractor-drawn combine averages about 65 cents an acre, the cost per bushel being about 3¼ cents on a 20-bushel yield per acre.

Among other harvesting devices the report mentions the wagon-box header, which, however, can be successfully used only for kafir and other erect-headed sorghums having stalks of uniform height. With a wagon-box header a man and a team can harvest 3 to 5 acres a day, the cost per acre for harvesting an average of four acres per day being about 90 cents, on the wage basis previously mentioned.

Industrial Relations Policies in Ontario, Canada

THE extent of the development of personnel features in the principal industries of the Province of Ontario is shown by a recent inquiry made by the Department of Labor of that Province.[2] The study covered 300 plants employing about 185,000 workers and while it was not exhaustive it is regarded as being fairly representa-

[1] United States. Department of Agriculture. Farmers' bulletin No. 1577: Harvesting grain sorghums. Washington, 1928.

[2] Social Welfare, Toronto, August, 1928, pp. 245-247, 259: "Industrial relations," by Marion Findlay.

tive of conditions in large and small industries throughout the Province. The inquiry covered the practices in these establishments in regard to the installation of accident prevention and health measures, recreation, and various insurance and other personnel features.

The workmen's compensation act has had the effect of developing the safety work in industrial plants so that expert mechanical knowledge is being applied to safeguarding dangerous machinery and closer attention is being given to the problems of lighting and ventilation, to good housekeeping methods generally, to the proper placement of employees so that they shall not be a menace to other employees, and to the education of employees in the necessity for the exercise of safe methods and constant precaution. Many of the 300 firms reported a decided improvement in the time lost as a result of accidents, although there is still much to be done in training employees to secure first-aid attention in minor accidents, the report of the workmen's compensation board for 1927 showing that 21 deaths and 38 disabilities, 9 of which were amputations, were due to infections.

The work of accident prevention is closely allied with general health work among employees, and the requirement of the workmen's compensation law that adequate first-aid equipment should be installed was found to be exceeded by many of the firms. More than 70 of the companies employed graduate nurses in the plant hospitals, while several of the larger plants employed full-time doctors to take care of the general health of employees as well as the accident and other emergency work.

Lunch rooms were reported by firms employing approximately 50 per cent of the total number of workers. In these plants a regular dinner was served, usually at cost or less, while several firms had lunch rooms where tea, coffee, and milk were served free or at a nominal charge. In practically no case did the management aim to operate the cafeteria at a profit, while in some cases there was an annual deficit amounting to several thousand dollars.

About 41 per cent of the firms, employing three-quarters of the workers, provide some type of recreation for their employees. In the majority of cases the recreational features are managed by an athletic association or recreation club supported by membership fees and usually receiving an annual contribution from the firm. In a few of the larger plants the firm employs a sports director, who devotes his whole time to managing the athletic activities of the employees, while many of the companies provide baseball diamonds and athletic fields with facilities for various sports. It is a rather general practice, in places where the community makes provision for athletics, recreation, and social activities, for the firm to cooperate with the community organizations and to encourage the employees to identify themselves with the community activities.

As in the United States, the practice of giving factory workers vacations with pay has had a considerable development during the past few years. About 60 firms, employing nearly 60,000 workers, were found to be giving an annual vacation with pay to all workers after a stated length of service and 96 firms gave holidays with pay to foremen, time workers, and salaried workers, while in numerous cases workers were allowed to arrange for leave without pay. The usual plan for factory workers is to give one week's vacation after

one, two, or three years' service and two weeks after two to five years' service, although in a few instances a vacation was not given until after ten or more years of employment. The most generous plan found was one giving two weeks with full pay to all factory workers with one year's service or over. Several firms without a definite vacation plan give an annual vacation with pay to the older and more reliable employees. Two or three firms have the 5-day working week for female employees and for this reason make no other provision for holidays, while several companies have the 5-day week during the three summer months for all employees, either in addition to or instead of holidays with pay. Works councils or some form of shop committee were established in about one-fifth of the plants. These councils enable employees to have some voice in the arrangement of working conditions, wages, hours, safety, recreation, education, and general welfare and they are considered to have proved beneficial to both employers and employees.

Insurance plans occupy a prominent place in the industrial-relations plans of the companies visited in the survey. Of the 300 firms scheduled, 212 were reported as having some scheme for the financial advancement of their employees. Seventy-eight firms, employing nearly one-half of the total number, were found to have some form of insurance other than group, and more than 100 firms had a group insurance system in effect. In general, among firms having any form of sick benefits, all permanent employees are eligible for membership and in a few cases it is a necessary condition of employment. Nearly all of the sickness insurance schemes are contributory and in many cases the funds are supported by the employees alone. The amounts of the contributions may be based on length of service, earnings, or age, or the contribution may be set at a flat rate, which is generally less for women. One firm is cited as having established a complete system of financial aid, including sick benefits, group insurance, and pensions, all of which are on an adequate scale, and a cooperative trust fund for the purchase of company stock.

More than one-half of the firms having group insurance pay the entire premium, although the more recent trend is toward the contributory plan. Usually from three months to three years of continuous service is required before an employee can be insured and frequently females are not eligible, or, if so, at a lower rate. Sickness and disability insurance are carried by a number of firms in conjunction with the group life insurance. About 55 per cent of the total employees scheduled were covered by a regular pension scheme while 12 firms reported that old employees were kept on the pay roll at light work as long as possible and when it became necessary to retire them each case was dealt with on its merits. The pension funds were, in most cases, maintained by the employers and in the case of contributory systems the companies make substantial contributions to the funds. From 20 to 25 years' service is usually required for eligibility for a pension and the retirement age is usually 65 years for men and 55 for women.

Bonus systems of various sorts were in force in about one-quarter of the plants visited, these bonuses being paid for punctuality and regularity in attendance, length of service, etc., while a number of firms had plans for the promotion of systematic saving among their

employees. The sale of company stock to employees was not found to have become a common practice in Ontario although a number of successful plans were reported.

Other features of the industrial relations policies of the companies include legal advice, loans for buying houses, plant papers, suggestion systems, and service clubs, while of great importance is the effort being made by many firms to stabilize employment. One firm, it is said, guarantees 48 weeks' employment per year to all permanent employees, which has resulted in a reduction in turnover.

No inquiry was made as to the wages of the employees covered in this study but as only 1,500 workers were involved in disputes over wages in 1927, it was considered to be an indication that fair rates are generally maintained throughout the Province. The hours of labor are an important factor in the welfare of employees. From reports of 276 firms having 167,634 employees, it was shown that 73 per cent worked a 48-hour week or less, 22 per cent worked from 49 to 54 hours, and 4 per cent worked 55 hours or longer.

Utilizing Slack Seasons in Farming in Suancheng and Nanking, China

ACCORDING to the Chinese Economic Bulletin for October 27, 1928, in slack seasons the farmers of Suancheng distill liquor, make incense dust, and weave. Liquors are distilled from kaoliang, rice, wheat, and barley, and are consumed mainly on the local market. Approximately one-third of these liquors is taken to near-by towns in wooden casks transported by draft animals. In certain localities of the district, liquors are also distilled from maize and potatoes.

Incense dust is made by drying elm bark in the sun, braying it in a mortar, and passing it through a horsehair sieve.

The greater portion of the cotton cloth used in Suancheng is woven on cottage looms. The farmers generally have a small patch of cotton, and the cotton ginners in the market towns gin the raw cotton for the privilege of keeping the seeds. The ginned cotton is spun into coarse yarn and woven into cloth for the most part for the use of the farmers themselves. In addition to the cottage looms there are from 30 to 40 cloth weaving mills in the city, each having from 3 or 4 to 8 or 9 looms. Certain mills also produce turkish towels. Sackcloth and four other kinds of cloth are also turned out by the mills. The piece rates of the mill hands run from about 10 cents (5 cents United States currency [1]) for weaving a piece of lao pu for the smaller size, 1 to 1.1 feet [2] by 30 feet, Chinese measure, to 40 cents (20 cents United States currency) for a piece of sackcloth. The average monthly wage of an experienced hand is from $7 to $8 ($3.50 to $4, United States currency) in addition to lodging and board.

Hosiery knitting is a new industry for the district, there being now about eight or nine family workshops producing cotton socks for local wear. Each workshop has only a few hand-operated knitting machines.

[1] Conversions into U. S. currency made on basis of Chinese dollar=50 cents.
[2] Chinese measure; 1 Chinese foot=12.6 inches.

The Nanking farmers during slack seasons also take up various remunerative activities. For example, the farmers in the southern suburb deal in drugs and those who live near Hwashengmiao are florists. In the northern suburb sericulture and gardening are the usual extra occupations and in the northeastern suburb liquor brewing is selected. For agriculturists who live near lakes and rivers duck raising, fish culture, and the growing of edible water plants are available.

New Labor and Social Welfare Department in Costa Rica

A DEPARTMENT of labor and social welfare is to be created in Costa Rica as the result of a measure which was approved by the Costa Rican Congress on June 27, 1928, and later signed by the President, according to a statement in the November, 1928, issue of the Pan American Union Bulletin.

The new department is to prepare a labor code setting forth regulations for labor contracts, savings and pension plans, organization of the labor office, labor associations, the housing of laborers, and conciliatory and arbitral proceedings. Among its other functions are to be the organization of a service for the inspection of mines and industries, labor in general, industrial and professional instruction, and insurance and social welfare; the inspection of the execution of labor and social welfare laws; and the foundation and organization of an institute of social studies.

PRODUCTIVITY OF LABOR AND INDUSTRY

Progress in National Efficiency

THE increase in the output per worker in the major American industries between 1918–1920 and 1926–27 amounted to 34.5 per cent, according to the annual report of the Secretary of Commerce for the fiscal year ended June 30, 1928. The following extracts from the report give the details of the study:

Since the final results of the census of 1927 have not yet been compiled, calculation of the increase in efficiency of the factories down to that year must rest upon the less complete but fairly representative indexes of production of manufactured commodities issued by the Department of Commerce and the less complete index of the number employed in factories issued by the Department of Labor. In the case of agriculture, moreover, it has been necessary to assume a continuance of the decrease in the number of workers on farms revealed by the agricultural census of 1925. While, therefore, the accompanying table is somewhat less nearly precise than that published in the previous annual report it is entirely certain that between 1925 and 1927 there was a further increase in production per worker in both manufacturing and agricultural industry. The table, which even in years covered by census statistics necessarily involves a considerable resort to estimation, nevertheless shows within a reasonable margin the true tendency of American industry since the beginning of the century and since the close of the World War.

It will be seen that as compared with the annual average for the period 1898 to 1900 the average for the two calendar years 1926 and 1927 shows an increase of approximately 55 per cent in the output of farm products, 280 per cent in the output of minerals (an exceptionally large figure, owing particularly to the immense expansion in petroleum production), about 180 per cent in factory output, and over 200 per cent in the volume of rail transportation. These remarkable figures compare with an addition of about 55 per cent to the population of the country. It is obvious that there is produced for each person in the population a far greater volume of goods and services than at the beginning of the century, which means, of course, a great advance in living standards.

In the case of every one of these four major branches of industry the increase in output since 1898 and 1900 has been far greater than that in the number of workers. In agriculture, manufactures, and railways the product of goods or services per worker engaged has increased from 50 to 60 per cent. For mining the increase per worker is much higher, the difference, however, being due to the fact that the production of petroleum has multiplied several times, and that, in the petroleum industry, output per worker, on account of great investment of capital and the generosity of natural resources, is much higher than in other mining industries.

INDEXES OF GAIN IN EFFICIENCY OF INDUSTRY

[Data for manufactures refer to 1899, 1919, and 1927. Other data are averages for the periods 1898–1900, 1918–1920, and 1926–27]

Industry	Number of workers		Indexes on base 1898–1900=100			Value of output, 1898–1900, used for weighting (millions of dollars)
	1898–1900	1926–27	Number of workers	Quantitative output	Output per worker	
Agriculture	10,700,000	10,500,000	98	155	157	3,500
Mining	600,000	1,050,000	176	379	215	600
Manufactures	5,300,000	[1] 9,880,000	186½	279	149½	4,830
Rail transportation	975,000	1,865,000	191½	308	161	1,300
Total or average	17,575,000	23,295,000	[2] 132.5	[3] 246 [4] 208½	185½ 157	10,230

Industry	Number of workers		Indexes on base 1918–1920=100			Value of output, 1918–1920, used for weighting (millions of dollars)
	1918–1920	1926–27	Number of workers	Quantitative output	Output per worker	
Agriculture	11,300,000	10,500,000	93	118	127	15,700
Mining	1,050,000	1,050,000	100	138	138	3,175
Manufactures	10,675,000	9,725,000	91	130½	143	24,750
Rail transportation	2,035,000	1,865,000	91½	102½	112	4,725
Total or average	25,060,000	23,140,000	[2] 92.3	[3] 124 [4] 123	134½ 133	48,350

[1] Estimated, including small plants formerly but not now covered by the returns; for this reason the figure is larger than that shown below for the same period.
[2] Actual change in number of workers.
[3] Weighted by value.
[4] Weighted by workers.

In the table two averages for increase in output of these four major branches of industry combined are presented. One is obtained by giving to each industry a weight corresponding to the number of persons employed in it. This shows an increase of 108 per cent in actual output and of 57 per cent in average output per worker since the beginning of the century. The other average is computed by weighting the changes in production for the individual branches according to the value of their product. The increase here is much higher on account of the relative shift of workers from agriculture to industries, in which, at least according to the published statistics, the average value of output per worker is greater than on the farms. There are, however, so many intricacies involved in a calculation of the values produced in the different branches of industry that this second average is in some respects less significant than that based on a weighting according to the number of workers. To whatever extent there actually exist differences in the value of output per worker in the several branches of industry, a relative shift of workers from a branch producing less to a branch producing more per man is, of course, a gain to the community. Such differences among branches of industry as respects the value of output per worker must not be taken as reflecting variations in efficiency of the workers, but are chiefly due to differences in the quantity of capital and mechanical (or animal) power used to aid the workers.

It will be observed that the increase in the aggregate number of workers in these four major branches of industry since the beginning of the century, about 32½ per cent, is decidedly less than the increase in total population, which has been about 55 per cent. Just as there has been throughout American history a relative shift from the oldest of all industries—agriculture—into mining, manufactures, and rail transportation, so since 1900 there has been a shift, especially during recent years, both from agriculture and from these other three branches into the mercantile, professional, and personal-service pursuits. The numbers employed in these have increased much more rapidly than the total population.

The most conspicuous illustration of this shift in the work of the people is the immense increase, particularly during the last decade, in the number engaged in occupations connected with motor cars, apart from those manufacturing the vehicles themselves. It is probable that in the neighborhood of 3,000,000 of persons are to-day engaged in selling automobiles and supplies for them, repairing them, building roads, driving trucks, taxicabs, and busses, and in other related fields.

Another reason why the increase since 1900 in the number employed on farms and railways and in mines and factories is less than that in population is found in the great addition to the number of young persons in the high schools, colleges, and universities. Many, if not most of these, were formerly at work. The movement reflects advancing standards of living and a better citizenship and is at the same time one of the causes of the greater efficiency of the working population. In the short period from 1920 to 1926 the number of students in institutions of intermediate (not including elementary) and higher education rose from 3,000,000 to 5,000,000 or by 60 per cent.

An analysis of the statistics of production by decades brings out certain noteworthy changes as regards output per worker in agriculture, mining, manufactures, and railways. During the first decade of the century, and doubtless down to the outbreak of the war, there was an increase in this respect in each of the four branches. On the other hand, during the war great numbers of workers and great quantities of capital were shifted to new jobs, and there was a general dislocation of industry, especially of manufacturing industry. Consequently, a temporary recession occurred in the efficiency of production, particularly in the factories. With the return of peace conditions, the normal progress was resumed and apparently at a more rapid pace than ever before, although part of the extremely large increase in production per worker since 1918 to 1920 is attributable to the relatively low war-time efficiency of industry.

The table shows the comparative figures for these postwar years. Between 1918–1920 and 1926–27 (calendar years), as against an addition of about 12 per cent to the population, the farms increased their production approximately 18 per cent, the mines about 38 per cent, and the factories over 30 per cent; since the volume of rail transportation had been especially expanded by war conditions the railways show only a relatively small increase in amount of service. In agriculture, manufactures, and on the railways (perhaps also in the mines, for which only very rough estimates are available)

there has been a considerable decrease in the number of workers employed during recent years. Consequently, the advance in output per worker has been decidedly greater than the absolute increase in production.

Combining the figures for the four branches (in this case it makes little difference whether the indexes for the separate branches are weighted according to number of workers or according to value of output) there has been since 1918–1920 an increase of nearly one-fourth in the quantity of goods and services produced and of one-third in the average output per worker. The latter ratio of one-third reflects more closely the advance in living standards resulting from increased efficiency of industry than does the former, for it may be assumed that the workers who have gone from the farms, the factories, and the railways into other occupations are there producing services of at least approximately the same value as are produced by those who have remained in the other branches of industry.

The increase in production per worker which has taken place since the beginning of the century is the more noteworthy in view of the reduction in working hours. There has been no great change in prevailing working time, at least in manufacturing industries, since the close of the war, but before that time hours had been materially shortened. Between 1909 and 1923 the average working time per week in factories was reduced by 11 per cent, and it is probable that the reduction as compared with the beginning of the century was at least 15 per cent. In other words, production per man has increased materially more per hour than per day or per year, and the increased amount of leisure has been one of the important factors in advancing the welfare of the people.

Growth of Manufactures in the United States, 1899 to 1925

INDUSTRIAL production in the United States increased 175 per cent during the 26-year period 1899 to 1925, according to a recent monograph of the United States Bureau of the Census.[1] The population increase during this time was 54 per cent, thus giving a per capita output in 1925 nearly 80 per cent greater than in 1899. Primary horsepower installed increased over 250 per cent and the average number of wage earners employed, 80 per cent.

Table 1 gives the index numbers of growth in different industries by 5-year census periods, and for the 24-year period, 1899 to 1923, as measured by physical volume of production, average number of wage earners, and primary horsepower. It is stated that these three factors are the only ones which can be "made to serve effectively in the measurement of general industrial expansion," since the information on these points is expressed in physical terms and is not directly affected by changes in the value of money. The data for 1925 were not available when the main part of the report was prepared, hence they were presented separately.

[1] United States. Department of Commerce. Bureau of the Census. Census Monograph VIII: The growth of manufactures, 1899 to 1923; a study of indexes of increase in the volume of manufactured products, by Edmund E. Day and Woodlief Thomas. Washington, 1928.

TABLE 1.—GROWTH OF MANUFACTURES, 1899 TO 1923, BY INDUSTRIAL GROUPS [1]

Industrial group	Per cent of change					
	Intercensal period					24-year period, 1899–1923
	1899–1904	1904–1909	1909–1914	1914–1919	1919–1923	
All groups:						
Physical volume of production	+22.2	+30.3	+6.4	+26.1	+22.0	+160.7
Average number of wage earners	+16.0	+21.0	+6.4	+29.3	−2.5	+88.2
Primary horsepower	+33.6	+38.5	+20.1	+31.5	+12.8	+229.6
Iron and steel and their products:						
Physical volume of production	+19.9	+45.4	−5.6	+40.6	+31.2	+203.7
Average number of wage earners	+16.6	+18.2	+3.4	+49.4	−3.6	+105.1
Primary horsepower	+52.0	+37.1	+21.4	+46.0	+10.7	+308.8
Nonferrous metals and their products:						
Physical volume of production	+41.7	+36.2	+7.1	+54.1	+25.7	+330.3
Average number of wage earners	+23.0	+25.7	+5.0	+29.5	−3.2	+103.5
Primary horsepower	+35.5	+59.2	+24.2	+71.9	+23.2	+467.5
Chemicals and allied products:						
Physical volume of production	+42.1	+37.1	+20.2	+41.4	+25.1	+314.2
Average number of wage earners	+15.7	+17.6	+12.1	+42.5	−5.0	+106.4
Primary horsepower	+58.3	+40.6	+43.1	+39.2	+32.5	+487.6
Stone, clay, and glass products:						
Physical volume of production	+17.2	+32.2	+8.8	−11.9	+55.6	+131.2
Average number of wage earners	+23.1	+20.1	−2.4	−10.7	+16.6	+50.3
Primary horsepower	+52.1	+60.0	+20.2	+5.3	+21.6	+274.3
Lumber and its manufactures:						
Physical volume of production	−2.3	+32.0	−19.4	−9.6	+10.1	+3.5
Average number of wage earners	+9.3	+24.2	−8.6	+.7	+8.5	+35.5
Primary horsepower	+4.9	+46.5	−2.0	+7.3	−2.2	+58.1
Paper and printing:						
Physical volume of production	+41.8	+34.5	+25.4	+14.3	+37.1	+274.6
Average number of wage earners	+17.7	+18.3	+8.9	+12.6	+4.9	+79.1
Primary horsepower	+43.2	+28.0	+22.6	+14.5	+16.9	+200.7
Textiles and their products:						
Physical volume of production	+18.5	+27.8	+5.3	+3.3	+22.9	+102.5
Average number of wage earners	+13.1	+24.3	+4.3	+6.9	+6.7	+67.1
Primary horsepower	+25.0	+31.1	+20.3	+19.0	+16.4	+173.0
Leather and its finished products:						
Physical volume of production	+16.8	+7.6	−.3	+14.4	+5.6	+51.3
Average number of wage earners	+6.4	+17.1	−.9	+13.8	−1.2	+38.8
Primary horsepower	+27.4	+38.1	+13.1	+22.4	+8.0	+163.0
Food and kindred products:						
Physical volume of production	+22.8	+14.9	+8.0	+23.8	+11.6	+110.6
Average number of wage earners	+17.3	+16.2	+20.6	+38.0	−8.2	+108.2
Primary horsepower	+18.8	+22.8	+15.6	+28.9	+3.0	+123.9
Liquors and beverages:						
Physical volume of production	+32.5	+15.3	+18.3	−56.9	----------	----------
Average number of wage earners	+24.0	+13.9	+13.3	−37.1	−42.5	−42.2
Primary horsepower	+36.6	+28.4	+17.8	−21.0	−40.1	−2.3
Tobacco manufactures:						
Physical volume of production	+24.8	+15.2	+14.7	+30.9	+9.8	+137.1
Average number of wage earners	+20.3	+4.6	+7.2	−12.2	−5.6	+11.9
Primary horsepower	+10.4	+15.9	+22.5	+24.2	+.3	+95.2
Vehicles for land transportation and railroad repair shops:						
Physical volume of production	+86.4	+90.0	+130.8	+177.8	+99.5	+4,434.0
Average number of wage earners	+22.4	+31.9	+24.0	+60.8	+8.2	+248.3
Primary horsepower	+44.6	+81.8	+42.3	+63.7	+40.4	+759.2
Miscellaneous products:						
Average number of wage earners	+25.2	+18.0	+21.5	+109.5	−30.4	+154.5
Primary horsepower	+74.3	+39.7	+51.9	+80.6	+10.3	+636.5

[1] These figures are given for the purpose of showing growth of manufactures as a whole and by groups, as indicated by different means of measurement. The three sets of data for individual groups should not be used as an indication of changes in output per worker, because in some cases the group index is based upon data for industries which are not entirely representative of the group as a whole, whereas the figures for wage earners and horsepower are totals for the entire group. This is particularly true of the lumber group and to a less degree of food products and paper and printing.

The principal points brought out by the figures compiled for the individual industries are summed up as follows in the report:

The net resultant for the entire period 1919–1923 was substantial growth for industry as a whole, characterized by almost amazing increases in automobiles and related industries—rubber tires and petroleum refining—by the largest output of building materials since before the war, and by moderate increases in the

production of iron and steel, nonferrous metals, textiles, and paper. With the exception of shipbuilding and liquors and beverages, which decreased under the influence of special circumstances, leather, food products, and tobacco showed the smallest increases for the period.

When the growth of manufactures by industrial groups for the 24-year period from 1899 to 1923, taken as a whole, is considered, it is evident that the expansion of industries manufacturing vehicles for land transportation stands at the top of the list, with the miscellaneous group second, and chemicals and metals next. The increase for paper and printing follows in order. Tobacco (as measured by increases in physical output, although not in wage earners or horsepower), food products, and stone, clay, and glass products are close to the center of the list. Textiles and leather stand fairly close together, well below the average for all industries. Growth of the lumber industry has been very small, and liquors and beverages have shown net decreases since the beginning of the century.

Viewing these figures as a whole, a number of conclusions may be drawn regarding relative rates of growth in different lines of manufacture since 1899. The phenomenal increase in the output of automobiles is a fact too commonly recognized to call for further comment. The high increase in the output of miscellaneous products reflects in part the exceptionally rapid expansion of production of such articles as phonographs, photographic equipment and supplies, rubber products, and electrical appliances and machinery. The fact that the metals and chemicals groups stand well above the average for all groups combined bespeaks the increasing industrialization of modern economic life. Products most closely related to the consumer—food and tobacco on the one hand and clothing and footwear on the other—show increases which vary widely but in general are clearly well above the rate of increase of population, which for this 24-year period was nearly 50 per cent.

The growth of manufactures by geographic divisions for the census periods from 1899 to 1923, and for the 24-year period as a whole, is shown in Table 2. It was not feasible to compute index numbers of the physical volume of production by States or by larger geographic divisions. Therefore, the changes in industrial production in the different geographic divisions is indicated by percentage increases or decreases in average number of wage earners employed and in primary horsepower installed and by the combination of these two sets of percentages. While it was recognized that changes in the number of wage earners and in installed horsepower "do not accurately represent changes in the physical volume of production, they do serve to show relative rates of expansion or contraction of production among broad groups of manufacturing enterprise."

TABLE 2.—GROWTH OF MANUFACTURES, 1899 TO 1923, BY GEOGRAPHIC DIVISIONS

Geographic division	Per cent of change					
	Intercensal period					24-year period, 1899–1923
	1899–1904	1904–1909	1909–1914	1914–1919	1919–1923	
United States:						
Wage earners and horsepower combined	+20.2	+25.1	+9.7	+29.8	+1.1	+116.5
Average number of wage earners	+16.0	+21.0	+6.4	+29.3	−2.5	+88.2
Primary horsepower	+33.6	+38.5	+20.1	+31.5	+12.8	+229.6
New England:						
Wage earners and horsepower combined	+12.4	+19.7	+6.3	+19.2	−3.0	+65.5
Average number of wage earners	+10.4	+17.1	+3.5	+18.5	−6.9	+47.7
Primary horsepower	+18.6	+27.7	+15.1	+21.5	+9.9	+132.8
Middle Atlantic:						
Wage earners and horsepower combined	+21.9	+20.1	+10.1	+23.3	−1.4	+95.9
Average number of wage earners	+17.6	+17.0	+6.7	+21.9	−5.9	+68.4
Primary horsepower	+35.6	+30.0	+21.1	+27.4	+13.3	+208.2
East North Central:						
Wage earners and horsepower combined	+17.9	27.6	+14.0	+42.6	+4.1	+154.8
Average number of wage earners	+14.1	+23.6	+11.0	+42.6	−.1	+123.1
Primary horsepower	+29.9	+40.4	+23.7	+42.7	+17.9	+279.8

TABLE 2.—GROWTH OF MANUFACTURES, 1899 TO 1923, BY GEOGRAPHIC DIVISIONS—Continued

Geographic division	Per cent of change					
	Intercensal period					24-year period 1899–1923
	1899–1904	1904–1909	1909–1914	1914–1919	1919–1923	
West North Central:						
Wage earners and horsepower combined	+19.2	+25.9	+4.4	+30.4	−1.7	+100.8
Average number of wage earners	+17.4	+19.8	+1.9	+30.9	−5.0	+78.4
Primary horsepower	+24.6	+46.2	+12.4	+28.7	+8.7	+186.3
South Atlantic:						
Wage earners and horsepower combined	+20.8	+32.2	+8.2	+20.2	+5.3	+118.8
Average number of wage earners	+14.0	+26.9	+3.4	+19.3	+2.9	+83.5
Primary horsepower	+43.5	+50.0	+24.2	+22.9	+12.9	+270.8
East South Central:						
Wage earners and horsepower combined	+30.0	+22.8	+3.6	+24.0	+6.1	+117.5
Average number of wage earners	+24.8	+18.3	+1.0	+24.5	+6.9	+98.6
Primary horsepower	+46.8	+37.5	+11.7	+22.3	+3.6	+185.6
West South Central:						
Wage earners and horsepower combined	+29.7	+46.1	+5.3	+31.5	−2.2	+156.3
Average number of wage earners	+26.5	+42.6	+3.6	+34.6	−5.4	+138.0
Primary horsepower	+39.8	+57.2	+10.6	+22.8	+8.0	+222.3
Mountain:						
Wage earners and horsepower combined	+34.6	+48.3	+9.3	+38.1	+2.2	+208.0
Average number of wage earners	+18.6	+42.9	+7.5	+34.6	−1.6	+141.5
Primary horsepower	+96.6	+65.7	+14.8	+49.2	+14.5	+539.0
Pacific:						
Wage earners and horsepower combined	+41.1	+39.8	+16.5	+78.4	−.04	+409.7
Average number of wage earners	+33.2	+29.9	+10.5	+84.8	−2.7	+243.7
Primary horsepower	+67.6	+74.3	+36.5	+60.6	+8.4	+594.0

NOTE.—The percentages shown for wage earners and horsepower combined are weighted geometric averages of the individual percentages for wage earners and for horsepower, with wage earners weighted 3 and horsepower 1.

Table 3 shows for the different geographic divisions their relative positions as to volume of production in the 5-year census periods, 1899 to 1923:

TABLE 3.—RANKING OF GEOGRAPHIC DIVISIONS ACCORDING TO WEIGHTED AVERAGE OF INCREASES IN NUMBER OF WAGE EARNERS AND IN PRIMARY HORSEPOWER, FOR CENSUS PERIODS 1899 TO 1923

Geographic division	1899–1904	1904–1909	1909–1914	1914–1919	1919–1923	Total rank score
Pacific	1	3	1	1	5	11
Mountain	2	1	4	3	4	14
East North Central	8	5	2	2	3	20
West South Central	4	2	7	4	8	25
South Atlantic	6	4	5	8	2	25
East South Central	3	7	9	6	1	26
Middle Atlantic	5	8	3	7	6	29
West North Central	7	6	8	5	7	33
New England	9	9	6	9	9	42

The following paragraphs from the report summarize the changes in manufacturing development in the different sections of the country from 1899 to 1923:

Certain features of the rank lists are striking. One is the rise of the East North Central division from a relatively low position in the first intercensal period to near the top of the list in the period from 1909 to 1923. The rather radical changes in ranking in the latest period, 1919–1923, are especially notable. The Pacific and Mountain divisions which in earlier years were consistently near the top in rate of growth were moved down to the middle of the list, while the

East South Central and South Atlantic divisions which were near the bottom from 1909 to 1919 rose to first and second places. The tendency of the New England, West North Central, and Middle Atlantic divisions to occupy positions toward the foot of the rank list is also to be noted; two of these are old established manufacturing sections which passed through their stages of rapid expansion several decades ago, and the third is largely dominated by agricultural States, most of which have had little manufacturing development.

The changes in the years since 1899 may be effectively summarized by considering the combined increases in the average number of wage earners and primary horsepower for the full 24-year period 1899–1923. * * * Despite certain irregularities from one intercensal period to another, it is clear that the most rapid growth of manufacture has been in the Pacific, the Mountain, the West South Central, and the East North Central divisions. The South Atlantic and East South Central divisions, owing to rapid growth between 1919 and 1923, also show, for the full 24-year period, slightly larger increases than the average for the country as a whole. Expansion in the West North Central, Middle Atlantic, and New England States has been below the nation-wide average. New England has shown by far the smallest increase for the full 24-year period and also ranked lowest in rate of increase in every intercensal period shown except one.

Figures obtained in the 1925 biennial census of manufactures showed that the quantity of goods manufactured increased 5.3 per cent from 1923 to 1925 and the amount of primary horsepower installed increased 8.2 per cent. The number of wage earners employed, however, decreased 4.4 per cent. The report comments that "the increases in quantity of goods produced and in horsepower, in contrast to the further decrease in number of wage earners, indicate a continuation of the tendency, noted in earlier periods, particularly between 1919 and 1923, toward greater use of machinery in production and illustrate the limitations of employment statistics as a measure of industrial growth."

By industries and major industrial groups, the most rapid expansion between 1923 and 1925 occurred in the production of motor vehicles and allied products—rubber tires and gasoline. The large building activity of 1925 was reflected in the increased output of building materials, especially cement. The printing industry continued to expand, and growth was also shown in the canning and preserving, ice cream, and cigarette industries. Two comparatively new industries which increased considerably in the two years were those manufacturing radio apparatus and rayon. The manufacture of engines and of machine tools also showed some increase. There were decreases, however, during the period in most of the textile industries (silk being the most notable exception), in meat packing and flour milling, in the manufacture of leather and its products, in the railway-equipment industries, and in the production of musical instruments.

By geographic divisions and States, the East South Central and the South Atlantic States appeared to have had the largest expansion between 1923 and 1925, with development of the Pacific Coast and East North Central States continuing at a more rapid rate than that for the country as a whole. Growth was smallest in the New England and Middle Atlantic States, and the Mountain States showed relatively less expansion than in any previous period.

Comparative Operating Costs of Coal and Oil Burning Vessels

THE following table, prepared by the United States Shipping Board, gives detailed data regarding the operating performance, including wage costs, of certain vessels using coal as fuel compared with those using oil. It appears that, in these cases, the use of oil as fuel proved less expensive than coal.

FUEL PERFORMANCE OF FEDERAL TYPE VESSELS

Item	Average oil burner		Average coal burner		Steamship Mercer		
	New York	Philadelphia	New York	New York and Norfolk	Voyage No. 1, using coal	Voyage No. 5, using coal	Best voyage, using oil
Average speed.....knots..	10.35	10.35	10.17	10.17	9.33	10.48	10.00
Coal required per mile.....lbs..	----------	----------	377.0	377.0	376.7	409.0	----------
Oil required per mile.....do..	234.0	234.0	----------	----------	9.67	63.0	270.0
Cost of oil per barrel.....	$1.105	$0.95	----------	----------	$1.105	$1.105	$1.105
Cost of coal per ton.....	----------	----------	$5.69	$5.05	$5.05	$5.05	----------
Days required to travel 1,000 miles.....	4.026	4.026	4.097	4.097	4.46	3.975	4.17
Cost per 1,000 miles:							
Oil.....	$765.18	$657.85	----------	----------	$31.62	$206.05	$883.07
Coal.....	----------	----------	$958.00	$849.93	$849.00	$922.00	----------
Wages and subsistence.....	$535.26	$535.26	$627.00	$627.09	$628.86	$560.48	$554.40
Total cost per 1,000 miles..	$1,300.44	$1,193.11	$1,585.00	$1,477.02	$1,509.48	$1,688.53	$1,437.47

INDUSTRIAL ACCIDENTS

Accidents in the Construction Industry[1]

By Ethelbert Stewart, United States Commissioner of Labor Statistics

THE two problems which to-day occasion the gravest concern among administrators of workmen's compensation laws have to do with the small plant and the building construction industry.

While in the manufacturing industries as a whole accidents have been decreasing, we find the opposite to be true in the construction industry. In New York, for instance, we find that accidents in the construction industry have increased from 10,230 in the year ending June 30, 1923, to 21,606 in the fiscal year 1927 and 21,891 in 1928. The increase in the fiscal year 1928 over the year ending June 30, 1924, was 64 per cent, while the increase in all industries was but 28 per cent. It is probably fair to say that the New York figures over this period are not quite comparable since within this interval the waiting time was changed from 14 days to 7 days. However, waiting time does not affect the deaths and permanent total disabilities, and here we start with 123 deaths and permanent total disabilities in the year ending June 30, 1923. In 1924 the number jumps to 193, in 1925 to 205, in 1926 to 219, and in 1927 to 224. This is for building construction only, eliminating shipbuilding. If we take all construction, the deaths and permanent total disabilities jumped from 177 in 1923 to 319 in 1927.

In Ohio and in Pennsylvania we encounter the same results, and in Pennsylvania the same general upward trend both of fatal and nonfatal, except that in 1927 there was a slight falling off of nonfatal accidents. But even there, 1927 shows 231 fatal and 19,031 nonfatal accidents.

I know the answer of those engaged in the industry, that these figures do not show an increase in accident rates, and that the increase is due solely to the increase in the business, the number of people employed, etc. Unfortunately, no State has yet been able to secure the volume of employment in the construction industry, but so far as any evidence exists the figures do not bear out this statement. The National Safety Council has for a period of four years been receiving reports from a number of construction companies. True, the number is not large, but it affords all the evidence that there is upon this subject. The council's report for 1927 covers 59,707,836 man-hours worked, and this gives a frequency rate of 65.07 as against a frequency rate of 58.81 in 1924 and a severity rate of 7.13 as against a severity rate of 4.60 in 1924. These figures are not for identical plants and are given only because of the rather large number of man-hours covered. If we take identical plants reporting for three years (1925, 1926, and 1927) to the council we find a frequency rate of 73.31, 74.11, and 77.11, respectively.

[1] Paper read before the twelfth New York Industrial Safety Congress and Exhibit, Syracuse, N. Y., Dec. 3-6, 1928.

I am not unaware that the Associated General Contractors of America in its publications print from time to time a list of building concerns that have registered no accidents for certain periods of time. So far as the publication of such lists serves as an inspiration to contractors to work intelligently for accident prevention it is to be highly commended. So far as it acts to create the impression that all is well in the construction industry it is, to say the least, misleading. Its effect is just as bad as to attempt to cover up the bad conditions in small manufacturing plants by referring to the wonderful accomplishments of some of the United States Steel Corporation or Du Pont plants.

Premium Cost of Hazard

ONE is amazed at the amount of workmen's compensation which is assessed against the employers in the building industry—$8,115,469 in the year ending June 30, 1928, in the State of New York alone, and this is the amount actually paid to the injured workers. The premium assessed on the industry was much more, probably 40 per cent more. And the seriousness of the accidents is expressed in the fact that the compensation in these cases averaged $371 per case, which is $72 per case more than the average for all industries combined. As Commissioner Hamilton says, "This means that the accidents in building work cost about one and a half million dollars more than an equivalent number of accidents at the average rate."

When you see that Ohio charges a premium rate of $4 per hundred dollars of pay roll for masonry work, building chimneys only, that it charges $7.80 per hundred dollars of pay roll for structural-iron work, while it charges only $3.50 per hundred dollars of pay roll for coal mining, one is dazed that the men in the building industry in the United States do not get together and agree upon some intelligent building safety code that is sufficiently specific to be really effective in accident prevention. In New York the rate for structural-iron workers is practically $33 per hundred dollars of pay roll, or one-third of the wages. This means that since the New York City rate of wages for structural-steel workers is $12 a day, the workmen's compensation premium is $3 per man per day. I can remember when the wages of structural-steel workers in Illinois were not more than the premium is in New York City to-day. This enormous premium is passed on to the owners of the building or taken out of the quality of the material or both.

These staggering premium rates are a significant comment on the "soak 'em" theory that the way to reduce accidents either in small plants or anywhere else is to raise the premium rate to a prohibitive point.

I know the cry that is flaunted on the outer walls that "Our industry is different"; that "You can not make rules that will apply to any two jobs." We have heard this for a quarter of a century. Every industry at the outset puts up the same cry that it is different. But we know that there is not much difference in the contents of the coffins as they pass along.

When we look at the classification of accidents by causes we find that falls, handling objects, and falling objects constitute the vast

majority of causes just as in all other industries. The more you study building-construction accidents the less you think of the bugaboo of the cry of "different."

There is not necessarily a direct relation between safety precaution in building construction and quality of construction, yet there may be a relation. High accident insurance means a large item in construction cost, and a high construction cost is a strong incentive to poor construction. A contractor may argue that he will risk accidents and "skin the job" to make up any loss from accident liability. The honest and safe builder is thus put at a disadvantage in bidding and the building owner may be defrauded in poor construction.

Perhaps here is the place to say that the money-lending forces in the United States are beginning to realize that "jerry building" is getting to be poorer and poorer in quality, and they are preparing to refuse to lend money on shoddy construction work. They will prepare to inspect all buildings themselves before a loan is made, and it is not impossible that arrangements can be made with these forces to insist upon safety in construction, to the end that some of the enormous sums now spent on insurance premiums can be spent for better work and better materials. I expect within a year to see accident costs and bank credits so inseparably connected that the more reckless contractors can not borrow money. It is of vital interest to the banker to know whether or not the building upon which he plans a first-mortgage loan will in three or five years be a wreck. This movement will sweep away most of our ignorant and irresponsible contractors and subcontractors. It will protect our money lenders and it will protect the tens of thousands of people who are now buying tinder boxes on the installment plan when they think they are buying houses. When careless contractors find they can not borrow money they will be up against a problem they can neither pass on to the owner nor cut out of material or wages. We should do all in our power to encourage this movement to have bank credits based upon accident control.

I am not unaware that the builders of Detroit have put out a pamphlet on safety practices on construction work, which was published by the Associated General Contractors of America as its Manual of Accident Prevention in Construction, and while it is not so specific in its recommendations as it well might be, and while, having been drafted in 1921, it is sorely in need of some up-to-date revisions, nevertheless, it shows a willingness and an effort to do something; and while we have no figures to indicate whether or not it has affected the accident rate in the building industry in Detroit, we must give these builders credit for their attempt.

One of the greatest needs for care and for a code in the building industry has to do with the subject of demolition. Certainly, if we can take the District of Columbia's experience as typical, the hazard in demolition is much greater than that in construction. This belief is further borne out by the premium rate of the Ohio Industrial Commission, which is $18 per hundred dollars of pay roll for building wreckers, and for building movers other than wooden, $6, while the rate for building movers, wooden, is $8.50 per hundred dollars of pay roll.

It would seem in all conscience, since premium rates can be reduced only by reducing accidents, that the industry would be willing to take any steps that might prove helpful in reducing this hazard.

A few years ago the Travelers' Insurance Co. issued a pamphlet on Safety in Building Construction. It is highly illustrated, showing proper and improper methods of work both in demolition and construction. It may have had some influence, but apparently it has been treated as a picture book, while the accidents and the premium rates go merrily upward.

Need of Safety Standards in Demolition and Excavation Work

I THINK perhaps too little attention has been given by ourselves to this question of demolition. Few of us realize its extent, particularly in the older cities of the East. During the past five years 4,110 buildings have been torn down in the city of Philadelphia, and it is fairly safe to say that in all of the older communities the amount of demolition is proportionately great. In 1927, of the 551 buildings torn down in the city of Philadelphia, 459 were dwellings and 32 were stone buildings, 431 were brick buildings, and 88 were frame.

Our recent experience in Washington emphasizes the fact that the inspectors have no standards by which to judge of the safety methods being used either in the demolition of old buildings or in the excavations for new ones. A few months ago several workmen were killed and others injured by the collapse of a wall while a building was being torn down. In the latter part of October a cave-in, the third which had happened on the same job, occurred in the digging of a foundation for a new building. This happened right across the street from where the wall had fallen a few months before, and was, as I said, the third time there had been a cave-in on the same job. The contractor laid the blame on the passage of heavy trucks along the street, utterly ignoring the fact that the thing had occurred twice before and that any bracing of a wall ought to take into consideration the strain which would come from such a perfectly obvious source as street traffic. Besides, it is alleged that the District inspector had passed on the safety of the bracings about an hour before the cave-in took place. The contractor did not know how to build a safe supporting structure against the wall of his excavation, and the city inspector did not know when such bracing structure was safe. In this cave-in two men were killed, one man suffered practically permanent total disability, another was very seriously injured, and two others were less seriously hurt.

In New York during the fiscal year ending June 30, 1928, there were 373 demolition accidents and 744 excavating accidents. In most States a separate record is not kept for this type of work; and here perhaps is the place to suggest that better statistics will be sorely needed when we come to the long-delayed point of constructing a national safety code. We need statistics of accidents in large and small cities compared, accidents on large and small buildings compared, accidents of large contractors and small contractors compared.

Safety Regulation by Legislation

AS THE matter now stands, there are two sources of governmental regulation. The States have laws which have for their objective the safety of employees. The cities have laws which for the most part have for their objective the safety of the public. Then we have construction of Government buildings, over which neither the State nor the city inspectors have any jurisdiction, while the Government has no safety laws touching the construction of such buildings. It may be possible, along the lines of the law which required the railroads to use safety couplings on freight cars, to secure an act of Congress covering the construction of Federal buildings. Attempt is being made at the present time, as indicated by the Copeland bill, to regulate the use of spray guns in the painting of Government buildings. The object of the bill is simply to render the use of these guns more safe for the workers. If this can be done, there is no reason why a general construction safety act might not be passed.

We now have 24 States [1] with laws for the protection of employees on buildings. Nineteen States [2] have laws giving commissions power to make regulations on the subject, and 10 States [3] have both types of laws. Information is not available as to how many cities have building codes that include in their objective safety for the construction workers, but as stated above most city ordinances have in view public safety only.

Most of the State codes are out of date. New York is at present revising its building construction code, and I believe this is true also of Wisconsin and Ohio. The time, however, is overripe for a council of all the States to review their building laws in consonance with the new methods and types of building. And inasmuch as building contractors are becoming more and more engaged in interstate business, the wisdom of having a building safety code that all the States could adopt, thus making the regulations uniform, becomes more and more apparent. The calling of a conference of States for such purpose becomes more and more imperative. No doubt such cities as have given a safety slant to their building regulations should be included in such a call, and it is believed that there are enough building contractors who are alive to the situation and interested in reducing the accident hazards and the premium rates, and who would attend such a conference, to make it probably most representative of the industry as a whole.

The table following brings out the increase in accidents in building construction in New York from 1923–24 to 1927–28:

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[1] California, Colorado, Connecticut, Delaware, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, and Texas.

[2] Arizona, California, Colorado, Idaho, Massachusetts, Montana, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Tennessee, Utah, Washington, Wisconsin, and Wyoming.

[3] California, Colorado, Massachusetts, Montana, New Jersey, New York, North Dakota, Ohio, Oregon, and Pennsylvania.

ACCIDENTS IN THE CONSTRUCTION INDUSTRY AND IN ALL INDUSTRIES IN NEW YORK, 1923-24 TO 1927-28

Industry	Number of cases closed in year ending June 30—					Per cent of increase 1927-28 over 1923-24
	1924	1925	1926	1927	1928	
Carpentry	1,861	2,092	2,677	2,534	2,296	+23
Plumbing	1,037	1,283	1,762	1,842	1,807	+74
Subway construction	326	223	587	1,566	1,767	+442
Road making, paving, etc	878	1,061	1,319	1,571	1,642	+87
Masonry	1,458	1,331	1,467	1,494	1,394	−4
Iron work and metal construction	900	1,162	1,189	1,102	1,200	+33
Concrete construction	1,023	1,018	1,075	1,116	1,199	+17
Painting	760	814	1,070	921	900	+18
Excavating	769	795	1,075	911	744	−3
Plastering	342	623	641	640	644	+88
Roofing and sheet-metal work	369	491	635	609	636	+72
Conduits and pipes	186	218	366	462	550	+196
Electrical	350	481	596	624	522	+49
Installation of machinery, etc	250	311	297	410	422	+69
Shipbuilding	719	421	496	495	403	−44
Demolition of buildings	237	293	413	494	373	+57
Sewer construction	128	160	263	272	271	+112
Other construction	521	706	948	937	1,074	+106
General contracting, etc., with kind of work not stated	1,247	2,149	3,588	3,696	4,047	+225
Total, all construction work	13,361	15,632	20,464	21,606	21,891	+64
All industries	72,983	76,216	99,673	98,984	93,565	+28

Construction Accidents in New York State

THE New York State Industrial Commission has published, in its Industrial Bulletin for November, 1928, a statistical summary of 21,891 accidents in the various occupations of the construction industry during the year ending June 30, 1928.

These figures tend to show that the accident cost per case is greater in this industry than in any other industrial group, including manufacturing, transportation and public utilities, clerical and personal service, and trade. A total of $8,115,469 was awarded in compensation in these cases, or an average of $371 per case, which, it is stated, is $72 per case more than the average of $299 for all industries combined. This high cost is due partly to the relatively large number of deaths (more than in any other industry) and permanent total disabilities, 328 of the former and 18 of the latter, wherein the compensation award is based on the present actuarial value determined by the number and ages of dependents in cases of death and the age of the injured worker in total disability cases. Another factor, although of less importance, is that construction work is one of the highest paid kinds of work, and compensation varies with wages. But, it is pointed out, the maximum rate of compensation is $25 per week so that the workers earning the highest wages in this industry, such as ironworkers, masons, and plumbers, do not receive two-thirds of their wages, but only two-thirds of $37.50.

Time loss is a good measure of accident hazard. In the construction industry the average number of weeks for which compensation awards were made for permanent partial disabilities was 44.9, being exceeded by only one other industry group—clerical and personal service, with an average of 51.7 weeks. For temporary injuries the

average number of weeks awarded was 7.1, which was exceeded by no other industry, and was greater by about 1½ weeks than the average for all industries. The economic value of this time loss, the report suggests, is equivalent to a year's work for 500 workers at full time.

Considering the actual number of accidents, carpentry appears to be the most dangerous, for 2,296 or 10.5 per cent occurred in this occupation. The time loss and the compensation paid in the various branches of construction are not revealed. Plumbing is second with 1,807 or 8.3 per cent. These occupations are classified by chief causes of accidents, from which it may be seen that "handling objects" was responsible for the greatest number, about 27.4 per cent, with "falls" a close second, accounting for 25.5 per cent. However, the cost and severity of accidents due to falls were greater than for any other cause, probably due to the fact that most falls in construction work are from high elevations such as ladders, scaffolds, roofs, windows and parts of buildings, while in other industries falls are usually on the level or from low elevations such as step ladders, trucks, chairs, and boxes.

It is rather discouraging to note that accidents in the construction industry are increasing from year to year. The figures just cited constitute an increase of 64 per cent over those for the year ending June 30, 1924, while for all accidents the increase has been only 28 per cent in the same period. There was an increase of 442 per cent in subway construction alone. The only decrease, amounting to 4 per cent, was in masonry. Reasons for this large increase in the industry as a whole are the general increased activity in this class of work and the changes current in the types of structures that are being erected and the methods of building; also the fact that accident prevention has not been so well organized in this industry as in some others. The following table summarizes that portion of the report covering permanent partial and temporary disabilities, similar information for deaths and permanent total disabilities not being available:

NUMBER AND COST OF PERMANENT PARTIAL AND TEMPORARY DISABILITIES IN NEW YORK STATE, YEAR ENDING JUNE 30, 1928, BY INDUSTRY GROUP

Industry group	Permanent partial disabilities					Temporary disabilities				
	Number of cases	Weeks awarded		Compensation awarded		Number of cases	Weeks awarded		Compensation awarded	
		Number	Average	Amount	Average		Number	Average	Amount	Average
Construction	4,010	180,005	44.9	$3,420,301	$853	17,535	124,231	7.1	$2,206,025	$126
Manufacturing	7,056	294,641	41.8	5,062,970	718	27,806	130,426	4.7	1,981,615	71
Transportation	2,559	113,920	44.5	2,086,587	815	12,702	71,717	5.6	1,167,972	92
Public utilities	1,735	89,654	51.7	1,428,266	823	8,132	44,342	5.5	643,549	79
Clerical and personal service	1,362	52,879	38.8	938,069	689	7,458	37,966	5.1	583,895	78
Other trades	299	15,323	51.2	256,329	857	1,730	8,239	4.8	125,365	72
Total	17,021	746,422	43.9	13,192,522	775	75,363	416,921	5.5	6,708,421	89

Industrial Accidents in France

THE increasing importance of the industrial accident problem in French industry is shown by the report of a committee appointed by the French Union of Metallurgical and Mining Industries to study the question of accident prevention. This report, published in L'Information Sociale (Paris), November 15, 1928, shows the extent to which accidents have increased in France since the war, comparison being made with the year 1912. During the period of the war accident reports were not made regularly and the figures for that period are therefore incomplete. The following table taken from L'Information Sociale and the French Statistical Yearbook [1] for 1927 gives the number of deaths and cases of permanent and temporary disability for the years 1912 and 1919 to 1926:

NUMBER OF INDUSTRIAL ACCIDENTS IN FRANCE, LASTING MORE THAN 4 DAYS, 1912 AND 1919 TO 1926, BY RESULT

Year	Number of cases of—				Total
	Death	Permanent disability	Temporary disability lasting more than 4 days	Results unknown	
1912	2,052	5,682	511,824	5,636	525,194
1919	1,559	4,070	481,522	3,866	491,017
1920	1,932	5,932	640,528	7,959	656,351
1921	1,822	5,298	600,583	7,936	615,639
1922	1,837	6,513	668,713	5,767	682,830
1923	2,082	7,259	763,986	4,648	777,975
1924	2,229	8,472	839,623	6,551	856,875
1925	2,364	8,132	896,029	6,895	913,420
1926	2,392	8,093	973,151	5,806	989,442

The table shows that the total number of accidents in 1926 was nearly double the number in 1912, although the deaths and cases of permanent disability had not increased in the same ratio as the cases of temporary disability. There was an increase of 16.6 per cent in the number of deaths in 1926 as compared with 1912; of 42.4 per cent in the number of cases of permanent disability, and of 90.1 per cent in the cases of temporary disability. Although there was such a large increase in the total number of accidents, there was some improvement in the severity rate, as the number of cases of death and permanent disability formed 1.47 per cent of the total in 1912, while in 1926 they formed but 1.06 per cent of the total number of accidents causing more than four days' disability.

These figures are compiled by the Ministry of Labor from the reports by the mayors throughout the country, but they are considered to be an understatement of the facts, since many of the mayors do not transmit to the labor inspectors all the declarations of accidents made to them by employers. The statistics furnished by the insurance companies are regarded therefore as being more exact, and these show a total of 1,315,540 accidents in 1924, 1,673,257 in 1925, and 1,818,503 in 1926, the latter figure being just about twice the number reported by the Ministry of Labor. The report for metal works, including smelting and refining, furnished by the Ministry of Labor shows that accidents in these industries increased from 83,608 in 1913 to 351,673 in 1926.

[1] Ministère du Travail, de l'Hygiène, de l'Assistance, et de la Prévoyance Sociales. Statistique Générale de la France. Annuaire statistique, 1927. Paris, 1928.

HEALTH AND INDUSTRIAL HYGIENE

Acute Respiratory Diseases Among Office Workers

THE Statistical Bulletin for October, 1928, issued by the Metropolitan Life Insurance Co., contains a summary of a study of the number of cases of acute respiratory diseases occurring among the more than 9,200 clerical workers employed in the New York office of that company. The report covers the sickness experience in 1926, in which year there were 12,378 absences lasting one day or more which were caused by the common cold, influenza, bronchitis, and tonsillitis. These causes accounted for 1,345 absences for each 1,000 men and women on the pay roll, and the number of absences from all other types of disability amounted to 1,632 per 1,000, the acute respiratory diseases and tonsillitis accounting, therefore, for 45.2 per cent of all disabilities reported during the year.

From the standpoint of time lost on account of illness these diseases are likewise equally important. During 1926 there were 45,254 days lost on account of respiratory conditions, including tonsillitis, out of a total of 115,324 days lost. This is equivalent to 4.9 working days lost by each clerk annually from this cause as compared with an average of 7.6 days lost because of other disabilities. The average case of respiratory disease lasted 3.7 days, while the average for all other diseases was 4.7 days. The sickness rate among female clerical employees generally is much higher than among male employees and in the present study the rate for females exceeded that for males by 78 per cent, the rate for respiratory diseases alone being 54 per cent higher than among the males.

The following table shows the absences due to sickness, the days of disability, and the working days lost per absence in the clerical force referred to, by sex:

ABSENCES AND DAYS OF DISABILITY AMONG A GROUP OF OFFICE WORKERS IN 1926, BY SEX

Sex and cause of absence	Number of employees	Absences		Days of disability		Working days lost per absence
		Number	Per 1,000 on pay roll	Number	Per person on pay roll	
Males:						
Respiratory diseases		1,068	936	6,258	3.5	3.8
Other diseases and conditions		1,594	894	8,805	4.9	5.5
Total	1,783	3,262	1,830	15,063	8.4	4.6
Females:						
Respiratory diseases		10,710	1,443	38,996	5.3	3.6
Other diseases and conditions		13,430	1,810	61,265	8.2	4.6
Total	7,421	24,140	3,253	100,261	13.5	4.2

These data agree with other investigations among clerical and industrial personnel in showing the importance of the common cold as a cause of disability and absenteeism. There is no single cause of colds and there is therefore no single line of attack. The report states that "some are probably induced by primary acidemia; some seem to be allergic phenomena; others may be infections and would occur regardless of any marked change in systemic conditions; some may be induced by flagrant violation of the simpler hygienic rules; and still others may be induced by indoor and outdoor atmospheric conditions. Prevention, therefore, for the mass of workers may result from dietary practices which reduce acidemia, from the isolation of persons suffering from colds, from habits of dress suited to the weather, and from the production of comfortable indoor air conditions."

Health Promotion by Employees' Benefit Associations

THE growing realization that the loss to industry through preventable sickness is far greater than the loss through accidents is responsible for a renewed interest [1] in recent months in the work of mutual benefit associations, since these organizations are well adapted to carry on effective health work in industrial or commercial establishments. The extent of the health problem which industry is facing and the best methods of meeting it were discussed in a paper [2] read by Harold A. Ley, president of the Life Extension Institute, New York City, before the Seventeenth Annual Congress of the National Safety Council.

The tendency of legislation at the present time is to broaden the workmen's compensation laws to include occupational diseases—a purpose the justice of which no one can dispute—but even though it is admitted that it is right and proper that industry should compensate its workers for diseases incurred as a result of their employment, the fact remains that in many instances it is impossible to differentiate between occupational diseases and ordinary diseases. Hernia, for example, is certainly not an occupational disease, but when a man lifts a heavy box and suffers from strangulation, he claims compensation and receives it. This is true of various other ailments such as heart disease, vertigo, infections, etc., and it follows therefore that medical work directed toward the discovery and prevention of disabling conditions will reduce this drain both upon the workers and upon industry.

Studies by the Life Extension Institute and the United States Public Health Service seem to have established the fact that among the 42,000,000 gainfully employed persons in the country the time lost from illness and nonoccupational accidents amounts to as much as 350,000,000 days annually and that at present there is from seven to nine times as much time lost through sickness as through accidents. The annual economic cost to this country from preventable diseases and death was placed by the Life Extension Institute in its report to the Hoover Committee on the Elimination of Waste in Industry at more than $3,000,000,000, $1,800,000,000 of which is among the

[1] See Labor Review, December, 1928, pp. 104, 105.
[2] Hospital Management, Nov. 15, 1928, pp. 60-62: "Benefit Associations Can Do Much to Promote Employee Welfare," by Harold A. Ley.

gainfully employed. It was stated in that report, and has since been amply confirmed, that 25,000,000 in the working classes have defective vision requiring correction, that more than 1,000,000 have some form of tuberculosis, more than 8,000,000 have flat feet, more than 6,000,000 have organic diseases resulting mostly from infection, that there are more than 1,500,000 with venereal infection, and 500,000 working people die annually. At least one-half of this loss from death and disability is said to be preventable and postponable through proper medical supervision, periodic medical examination, health education, and community hygiene. In other words, an effective health program would result in saving $1,000,000,000 in industry every year. Much of this saving in ill-health the writer believes, could be obtained through the periodic health examination. The experience of life insurance companies shows the effects of a program of periodic examination. The Metropolitan Life Insurance Co. reports that there has been a 50 per cent reduction in mortality among its policyholders examined between the ages of 50 and 60 and of 18 per cent in the entire group examined, while the Guardian Life Insurance Co. reports 23 per cent reduction in mortality among policyholders examined by the Life Extension Institute, this reduction in mortality, in both instances, having taken place in the last 10 years.

Although the improvement of the health of the workers is a national problem, it is also a very personal problem and is one therefore in which every employer and worker should be interested. Aside from humanitarian reasons the employer is vitally interested from the standpoint of the efficiency of his employees and it is well worth his while to contribute to the health program in his own plant. The writer considers that the health promotion work can be carried on most effectively through the mutual benefit association and that a contribution amounting to 3 per cent of the pay roll, divided equally between employer and employees, will provide adequate health service. The Mutual Benefit Association managed by the employees is favored as it is preferable, in order to avoid mistrust on the part of the employees, that this medical work should be handled by the employees and not by the employer. This will not interfere with the maintenance of a medical department by the employer for the treatment of accidents and sickness nor with the physical examination of applicants for employment which is necessary for the protection of the employer and of the benefit association as well. Before health conditions among any group of employees can be improved it is necessary to find out their physical condition and the conditions under which they live. The first requisite then is a thorough physical examination with instructions as to the necessary medical treatment and the correction of errors in diet and hygiene which are often directly responsible for ill health. It is difficult, however, to interest most people in a physical examination, as they either think themselves perfectly well, or if they know they are not they fear the information disclosed by the examination will be used against them. The majority of people measure their health by pain, which is a very poor method of measurement since there is no pain in the early stages of many of the most serious diseases, such as tuberculosis, Bright's disease, heart disease, cancer, or anemia, and if nothing is done before pain appears it is often too late in these cases to do anything.

The important thing, therefore, is to convince the employees of the importance of annual examinations and to inspire them to take steps to correct the impairments that are found. The writer believes that the most effective way of securing the cooperation of employees is through the mutual benefit association, which assures them adequate health supervision and medical attention, life insurance equal to one and one-half times the annual salary, payable in case of death or total disability, and two-thirds pay for 26 weeks in case of sickness or accidents not covered by the workmen's compensation laws. Such an association lays a foundation for an interest in preventive work and employer and employees will work together in it for a common purpose.

Campaign for the Prevention of Blindness Among Industrial Workers

A NATION-WIDE educational campaign for the prevention of blindness and the conservation of vision among the industrial workers of America and among their families will be launched immediately as a joint effort of the American Federation of Labor and the National Society for the Prevention of Blindness according to a recent announcement by the latter organization.

The Society for the Prevention of Blindness has for some 20 years led the fight for conservation of vision; the Federation of Labor is now joining hands with this society for an intensive campaign within the membership of the federation because of requests for assistance in health education which have come to the Washington headquarters of the American Federation of Labor from various State and local labor bodies and because of the growing seriousness of the eye hazards of industrial occupations.

In announcing the campaign, Lewis H. Carris, managing director of the National Society for the Prevention of Blindness, declared:

> The campaign is being undertaken because of our conviction that the eye hazards of industrial occupations—that is, accidents, diseases affecting the eye, and eyestrain—now constitute probably the most serious cause of blindness and impairment of vision among workmen in America. It is the belief of the officers of both organizations that a very large percentage of industrial blindness is preventable and that many of the eye hazards in the home, on the street, and in other places outside of industry, which at present threaten the sight of the wives and children of our workmen, also are avoidable.

The campaign for the prevention of blindness will be carried on through the various publications of the American Federation of Labor and of local labor bodies, through radio broadcasting, exhibits in the meeting places of labor organizations, and other avenues of health education. The announcement of the campaign by the American Federation of Labor and the Society for the Prevention of Blindness says:

> The seriousness of the situation which this campaign seeks to correct may be appreciated when one thinks of the following few facts: The industries of this country are at present paying approximately $10,000,000 a year compensation to workmen who have been totally or permanently blinded while at work. This expense is inevitably reflected in the cost of commodities and thereby in the cost of living. The direct loss to the working men and women of America through lowered efficiency or earning capacity following blindness or serious impairment of vision is probably much more than $10,000,000 a year. There is a further loss, intangible, but probably even more serious than the foregoing, in the tragedy

which enters every home in which a person has been blinded or has lost part of his sight permanently—a tragedy which often spells disaster.

Close students of industrial conditions are now convinced that 98 per cent of all industrial accidents are preventable. If this applies also to the eye hazards of industry, this joint effort of the American Federation of Labor and the Society for the Prevention of Blindness and the society's program within the industries themselves and among employer groups should result in the saving of many men's and women's eyes.

Endemic Pellagra in Cotton-Mill Villages of South Carolina

SOME of the conclusions reached from a study [1] of pellagra by the United States Public Health Service which extended over a period of about five and a half years were published in Public Health Reports of October 12, 1928.

The study, which began in the spring of 1916 and ended in October, 1921, covered several textile-mill communities in South Carolina, the number studied varying at different periods from 1 to 24 villages. Only one of the villages was under observation throughout the entire period and it is the findings of this study, much delayed for various reasons, which are now summarized. The study is regarded as important from the fact that it shows the fluctuations in the incidence of the disease from year to year and also because it brought out the more important factors in these fluctuations. During 1917, the period when the largest number of persons were under observation, in an aggregate population of 22,653 individuals there were 1,147 cases of pellagra reported, giving an incidence rate of 50.6 cases per 1,000.

It was shown by the study that pellagra in an endemic locality is from two to six times more prevalent than the experience of the local physicians would seem to indicate, and that the fatality rate when definitely marked cases of all grades of severity are considered does not appear to exceed 3 per cent.

The data show that endemic pellagra is preponderatingly a disease of children of from 2 to 15 years of age, a fact which does not seem to have been recognized before. It was found, also, that the single women, as compared with the married, widowed, or divorced, were relatively exempt from the disease. This was explained by the fact that in the population group under consideration, the single woman was usually a wage earner which would, in general, place her in a somewhat more advantageous position in regard to diet than the women who had other responsibilities. The incidence of the disease was found to be markedly seasonal, from 80 to 90 per cent of the cases beginning within the period from April to July, inclusive.

In view of the fact that diet has been proved to be an important factor in the incidence of the disease, the reason for seasonal variation in the development of cases is found in the variation in the diet brought about by the seasonal modification of the food supply. It was found that the disease had a marked and very sharply limited season of prevalence, the curve of which, with a slight lag, paralleled that of incidence. As marked seasonal variations in the food supply were shown in the village longest under observation, the relation of this variation in food supply to the striking seasonal incidence and prevalence of the disease is suggested.

[1] See Labor Review, February, 1919 (pp. 221-226), and November, 1927 (p. 39).

No consistent correlation between sanitary conditions and pellagra incidence was demonstrated by the study, but such association as was at times observed was regarded as accidental and due to the intimate relation of the endemic disease to economic status, of which the sanitary condition is often an index.

There was a striking inverse correlation shown between the incidence of the disease and family income, the study of the selected village for nearly six years demonstrating that income shortage was a fundamental, though indirect, controlling factor in the year-to-year fluctuation in the occurrence of the disease. It seems evident, therefore, that the fluctuations from year to year are largely the effect of economic conditions that influence the ability of a certain section of the population to procure an adequate diet.

Fifth International Congress on Industrial Accidents and Occupational Diseases[1]

THE Fifth International Congress on Industrial Accidents and Occupational Diseases was held in Budapest, Hungary, September 2–8, with approximately 2,400 delegates present, representing countries in all parts of the world. The conference represents an earnest effort to establish a clearing house in order more effectually to combat industrial accidents and occupational diseases, and national committees appointed by the congress are active in most of the civilized countries. About 40 delegates were registered from the United States, 18 of whom formed a study group and, traveling together, visited clinics in Berlin, Vienna, Munich, southern France, and Spain, either before or after the congress.

Two hundred and six papers were read in one or another of the four official languages of the conference—English, French, German, and Italian—12 of these papers being presented by the American group. The papers read by the American delegates dealt with methods of treatment of traumatic conditions or diseases, with the effects of various poisonous vapors, the periodic health examination in industry, the medicolegal aspects of occupational diseases, the determination of permanent disability following head injuries, and occupational ear, nose, and throat diseases among American factory workers. Three of the papers represented the work of the Reconstruction Hospital in New York.

A resolution adopted by the conference dealt with the question of first aid and of after-treatment in cases of accident caused by electric currents, it being the opinion of the congress that the care given to electrical injuries is insufficient in all countries. The resolution states that there is "much to be desired in the field of electropathology and electric accidents as regards the treatment by doctors; likewise, as to knowledge by engineers in most countries of the dangers of electricity and protection against them."

The members of the congress put forward the request to the Government of every country that they should give every attention to the treatment of electric accidents just as the teaching of their prevention and practical instruction in a

[1] Journal of the American Medical Association, Chicago, Nov. 24, 1928, p. 1652.

corresponding degree should be given in the universities and technical schools, and that there should be a sufficient supply of instruments so that in future any accidents caused by electricity may be prevented and, if this is not altogether possible, that they should at least insure immediate help for the injured person for the saving of his life or for the easing of the serious consequences of the accident.

International cooperation for the establishment of electropathology and electrohygiene is likewise greatly to be desired and the earliest possible foundation of it insured. In the first place, these international workers must find out what the conditions are in each country for the prevention of electric accidents, what may be the educational equipment of doctors and technicians, likewise the necessary instruction of the people, after which it should be made compulsory in every country or State where electricity is employed and where electric accidents are likely to occur so certain insurance instructions should be maintained.

But in the first place an endeavor should be made that the course of instruction in universities and technical schools should be essentially better than it is at present in most countries. Every medical and technical student should be compelled to attend lectures and pass examinations on electropathology and therapy as well as on electrohygiene. In this respect every doctor and engineer should prove his practical and theoretical ability before the health and security of workers with and consumers of electricity be intrusted to them.

French Experience Regarding Occupational Diseases Caused by X rays and Radioactive Substances[1]

THE effects of occupational exposure to X rays, radium, and the various radioactive substances and the recent decision of the French Superior Commission on Occupational Diseases to include diseases resulting from exposure to radiations from these elements among the reportable diseases are discussed in an article in a recent issue of the Paris Médical.

The early and late effects of radioactive substances or emanations are said by the writer to be now sufficiently well established to constitute a symptom-complex or syndrome the cause of which is certain, so that it can be said positively that radiations from these substances cause a typical occupational disease.

The first signs of exposure to the radiations are blood changes, affecting first the white blood corpuscles and then the red. There is a reduction of the leucocytes in the peripheral blood below the normal standard or more rarely either a myeloid or lymphatic leucæmia, that is, a condition of the blood and the blood-making organs characterized by a permanent increase in the large white blood corpuscles and by enlargement of the spleen, the lymphatic glands, and the marrow of the bones, together or separately. There is also a deficiency in the number of red blood corpuscles, with abnormal inequality or irregularity in their size. Blood changes occur very early and have been demonstrated following a single exposure to the gamma rays of radium, while there is also lowering of the arterial pressure but with a maintenance of the cardiovascular equilibrium. Radiations have a direct effect on the reproduction cells, causing sterility and disordered menstruation and they cause troubles of nutrition, characterized by more or less marked loss of weight and showing various depressive symptoms, such as fatigue, drowsiness, headache, etc. However, the latter symptoms are

[1] Paris Médical (Paris, France): November, 1928, pp. 422-424 "Les accidents causés par les diverses radiations," par le Dr. F. Dervieux.

purely subjective and consequently susceptible of considerable individual variation and there is reason to question whether there is not some correlation between these symptoms and the blood changes. In addition to these pathologic conditions the radiations have a traumatic effect resulting in radiodermatitis, burns, lesions of the skin and underlying tissues, and malignant growths, while the special action of the ultra-violet rays should not be forgotten.

The methods of protecting workers subject to the hazards from radioactive substances have been considered in France by different interested organizations. In a report to the industrial hygiene commission the radioactive substances which are actually used in greater or less quantity were given as radium, radium emanation, radioactivity induced by radium or radon, polonium, actinium, thorium, mesothorium, and radiothorium, thorium X, emanation of thorium or thoron, and radioactivity induced by thorium. These elements act in three different ways: Through the direct rays which penetrate into the organs of the body, through the inhalation of radioactive emanations (radon or thoron), and through the absorption of solid or dissolved radioactive substances.

The protective measures recommended by the French Academy of Medicine are adequate ventilation of workplaces, use of rubber gloves and of forceps for handling materials, protection from the rays by the use of lead plates of adequate thickness, and periodic medical examination and blood examinations of all workers exposed to the radiations. There should also be similar protection against X rays, the industries or industrial operations which expose the workers to ultra-violet rays including the manufacture of mercury quartz lamps, taking moving pictures with electric arc lights, electric welding, autogenous welding, and numerous others.

A report upon the occupational diseases due to radiation presented to the Superior Commission on Occupational Diseases at a recent meeting listed uranium, and its salts, uranium X, and ionium among the elements presenting an industrial hazard in addition to those enumerated above. In this report it was recommended that the diseases which should be included among the reportable industrial diseases were skin affections, either acute or chronic, cancer, anemia with leucopenia, pernicious anemia and leucæmia, and radium necrosis, all of which were the direct effects of radiation, while certain other diseases such as degeneration of the bone marrow, atrophy of the spleen, and troubles of gestation were not included as it is not always possible to determine positively that they are solely the result of exposure to radiation.

The commission decided that the following types of industrial or commercial enterprises were potential sources of poisoning from these substances: Plants for the extraction of radioactive elements from minerals, manufacture of derivative radioactive substances; plants making medical appliances for radium therapy, or X-ray appliances; laboratories for research or measurement of radioactive substances and X rays; plants making radioactive chemical or pharmaceutical products, and factories making radioactive luminous products or workshops in which these paints are applied; clinics and sanitariums, centers for the treatment of cancer; enterprises for the sale of radium and radioactive substances; and manufacturing establishments using X rays.

The commission fixed the limit of responsibility for the development of these diseases at one year with the exception of cancer, which it was considered might develop at any time within five years.

Compulsory Insurance Against Tuberculosis in Italy

ON JULY 1, 1928, regulations for the purpose of administering the law instituting compulsory insurance against tuberculosis in Italy went into effect.

The new law applies automatically to all persons liable to compulsory insurance against invalidity and old age. It applies to workers in industries, commerce, and agriculture, and also to those who are beneficiaries of the mercantile marine invalidity fund. A number of institutions cooperate in administering this insurance, among them the National Social Insurance Fund (*Cassa Nazionale per le Assiçcurazione Sociali*), a special committee, and the provincial societies for combating tuberculosis. Below are given some of the important regulations, as digested from the decree issued on October 27, 1928, published in the Bolletino del Lavoro of July 31, 1928.

Collection of contributions.—The National Social Insurance Fund is charged with the financial management of the insurance against tuberculosis. Contributions are collected at the same time as the contributions for old-age, invalidity, and unemployment insurance. For agricultural workers employed by the day the contributions are fixed at 0.10 lira (0.526 cent) daily, 0.50 lira (2.63 cents) weekly, or 1 lira (5.26 cents) biweekly.

The National Insurance Fund, within the limits and conditions established for compulsory insurance, is authorized to permit voluntary insurance under conditions to be determined by a special committee and to be approved by the Minister of Economic Affairs.

Benefits.—Applications must be submitted to the fund by registered letter by the insured, his family, or his legal adviser, or by the local authority of his place of residence.

Medical examination is made at the hospitals connected with the fund or at dispensaries operated by the provincial antituberculosis societies with the aid of a physician of the fund. If the condition of the patient does not permit of an examination at these places, the examination is made by the traveling dispensary of the provincial antituberculosis society with the collaboration of a physician of the national fund. Papers and documents relating to benefits must be transmitted by the provincial societies to the national fund within 10 days. Where a favorable decision has been made, the insured is so advised by the fund by registered mail, indicating the day and place the insured is to present himself for treatment.

Treatment at home is provided by the National Social Insurance Fund only in case there is no room in any of the tuberculosis hospitals, or when the condition of the patient makes this necessary. Home treatment, however, must cease as soon as space is available in one of the tuberculosis hospitals and in any case the cost of medical treatment administered in the home must not exceed the cost of hospital treatment.

In each Province medical assistance is rendered by a committee consisting of the president of the antituberculosis society or his delegate, a physician of the fund, and a member of the provincial secretaryship of the Fascist Medical Association. A list of the names of physicians authorized to minister to patients in their homes must be posted in the prefectures and in each provincial community. In cases in which home treatment can be replaced by treatment at a dispensary, the patient may be directed to one of these dispensaries by the National Social Insurance Fund. The provincial antituberculosis societies, besides attending to the patient, are authorized to take prophylactic steps for the protection of the patient's family. The fund is required to inform the National Federation for the Protection of Mothers and Children whenever the patient is a child under 16 years of age or a pregnant or nursing woman. Cash benefits are payable at the end of each week and are limited to a period of six months. In exceptional and serious cases cash benefits may be prolonged by decision of the special committee. Professional secrecy is maintained in the proceedings of the various bodies concerned in the administration of insurance against tuberculosis.

Financial management.—In Industrial and Labor Information of September 24, 1928, published by the International Labor Office at Geneva, it is stated:

> The management of the insurance against tuberculosis is kept distinct from that of other branches of insurance in the national fund. The national fund is instructed to compile statistics of morbidity and mortality due to tuberculosis; the data must be submitted annually, together with the balance sheet, to the Minister of Economic Affairs and the Minister of the Interior. At the end of every three years, beginning from January 1, 1929, the national fund must submit to the ministry proposals for revision of the technical basis of insurance. The rules to be followed in the accounting and statistical work of the national fund must be approved by the Ministers of National Economy and of the Interior. The available capital of the insurance against tuberculosis may be invested under the same conditions as the capital appertaining to the national fund. Such capital must be assigned, so far as possible, to the provincial antituberculosis institutions for the building and maintenance of hospitals, especially sanatoria.

LABOR LAWS AND COURT DECISIONS

Preference for Local Labor on State Contract Work

THE Legislature of Wisconsin, at its first special session held in 1928, passed a joint resolution "relating to the discrimination against citizens of Wisconsin which is practiced by the State of Minnesota in connection with the erection of public buildings."

Sections 4434, 4435, and 4436 of the General Statutes of Minnesota for 1923, provide as follows:

SECTION 4434. *Material produced in State to be given preference in public buildings.*—In any and all buildings hereafter erected by the State of Minnesota, or to the erection of which the State of Minnesota has granted aid, preference shall always be given in the erection thereof to materials produced or manufactured in the State of Minnesota by citizens or residents thereof wherever practicable: *Provided*, That in the building and erecting of foundations, steps, approaches, and the outer walls of any and all such buildings, materials produced and manufactured in the State of Minnesota by citizens and residents thereof only shall be used: *Provided*, That the provisions of this act shall not apply to metal lath or Portland cement necessarily used in any such foundations, steps, approaches, or outer walls.

SEC. 4435. *Not to affect buildings in process of construction.*—This act shall not affect buildings now in process of construction nor shall it affect buildings for which contracts for the construction thereof have been entered into prior to the passage of this act: *Provided further*, That nothing in this act shall prevent the completion of buildings now partially erected with the same kind of materials which have heretofore been used: *Provided further*, That nothing in this act shall prevent an addition being made to any building now constructed out of the same material as the original building, nor the completion of any group of buildings out of the same material as was used in the construction of the buildings already completed.

SEC. 4436. *Not to apply where it appears pool has been formed.*—The provisions of this act shall not apply in any case where, in the judgment of the different officers, boards or other authority in this State, now or hereafter vested with the power of contracting for the buildings hereinbefore referred to, it appears that an attempt is being made by producers or manufacturers in this State to form a pool, trust, or combination of any kind for the purpose of fixing or regulating the price of materials to be used in any such building or buildings.

The 1925 session of the Minnesota Legislature added a new section, which provided as follows (ch. 189):

SECTION 2–A. That in all such buildings that involve the use of cut or dressed stone in their construction the work of cutting, dressing, or fabricating such stone shall be done within the territorial limits of the State of Minnesota, and provisions to this effect shall be incorporated in all contracts hereafter made for the erection of such buildings: *Provided*, That this act shall not be held to affect contracts existing at the time this act goes into effect.

Joint Resolution No. 7, of the first special session of the Wisconsin Legislature in 1928, was directed against "the discrimination against citizens of Wisconsin which is practiced by the State of Minnesota in connection with the erection of public buildings," and after referring to the above laws provided as follows:

Whereas boards, commissions, and other departments of the State of Wisconsin have in the past furnished plans and specifications of contemplated public buildings to the various building exchanges located in Minnesota, so that all Minnesota citizens and residents might have opportunity to make bids for the furnishing of

labor and materials toward the erection of such public buildings in Wisconsin, equally with the citizens and residents of this and every other State, and altogether regardless of the discrimination in favor of Minnesota residents by virtue of the laws of that State: Now, therefore, be it

Resolved by the Assembly, the Senate concurring, That all departments of the State of Wisconsin having to do with the erection of any public building to which the State grants any aid shall not hereafter furnish any plans and specifications to the various building exchanges located in Minnesota until Minnesota shall repeal all laws and statutes discriminating against the labor and materials of citizens and residents of Wisconsin or of other sister States. Be it further

Resolved, That copies of this resolution shall be sent to the governor, the State chief engineer, the highway commission, the State board of control, the board of regents of the university, the board of regents of normal schools, and to the governor of Minnesota.

Louisiana Act Favoring Local Labor and Industry Held Unconstitutional

THE Legislature of Louisiana in 1926 passed an act known as as the "shrimp act" for the purpose of encouraging the shrimp-canning industry in the State of Louisiana by withholding raw and unshelled shrimp from plants located in other States. The material provisions of the "shrimp act" are as follows:

SECTION 1. * * * That all salt water shrimp existing in the waters of this State, and the hulls and all parts of said salt water shrimp shall be and are hereby declared to be the property of the State; until the title thereto shall be divested in the manner and form herein authorized and shall be under the exclusive control of the department of conservation of the State of Louisiana, until the right of private ownership shall vest therein as herein provided, and that no person, firm, or corporation shall catch or have in their possession living or dead, any salt water shrimp, or parts thereof, or purchase, sell, or offer for sale, any such shrimp, or parts thereof, after same have been caught except as otherwise permitted herein. * * *

SEC. 4. That the right to take salt water shrimp from the waters of this State and the right to can, pack, or dry the said shrimp when caught are hereby granted to any resident of this State, to any firm or association composed of residents of this State, or to any corporation domiciled in or organized under the laws of this State, operating a canning or packing factory or drying platform in this State. These rights shall be confined to such persons and corporations and are granted subject to the further conditions hereinafter stipulated. * * *

SEC. 13. All salt water shrimp and the shells or hulls and heads of all salt water shrimp are hereby declared to be the property of the State, and the shells or hulls and heads to be valuable for use as a natural resource of the State as a fertilizer in the State; and it shall therefore and hereafter be unlawful to export from the State of Louisiana any salt water shrimp from which the shell or hull and head shall not have been removed.

In order that all of the inhabitants of the State of Louisiana may enjoy the State's natural food product, it shall be lawful to ship unshelled shrimp from any point in the State of Louisiana to any other point in the State of Louisiana for edible consumption, subject to such regulations and restrictions as may be imposed by the department of conservation. Any person, firm, or corporation of this State who shall lawfully take any shrimp from any of the waters of the State, or lawfully acquire the same, shall have a qualified interest or property in the shrimp so taken or acquired in the shells, which qualified interest may be sold or transferred to any other person, firm, or corporation within the limits of the State; and after the edible portions of the abdomen popularly called tail meat of said shrimp shall have been removed from the shell, within the State of Louisiana, such lawful taker or possessor, his heirs or assigns, as the case may be, shall be vested with all of the rights and property of the State in and to said shrimp tail meat and shall have the right to sell such shrimp tail meat or ship the same beyond the limit of the State, without restriction or reservation.

It shall be the duty of all licensees operating under the department of conservation in the shrimp industry in this State to conserve for fertilizer purposes all shells or hulls and heads of salt water shrimp and to report monthly, on blanks to be furnished by the department of conservation, the quantity thereof on hand, to the department of conservation. It shall be unlawful to export from the State of Louisiana any raw shells or hulls and heads of salt water shrimp as they are required to be manufactured into fertilizer or used for an element in chicken feed. When the shrimp hulls or shells and heads shall have been conserved for the purposes herein stated, the right of property therein theretofore existing in the State shall pass to the lawful taker or the possessor thereof. Any person, firm, or corporation violating the provisions of this section shall be liable to the penalties hereinafter imposed. (Acts of 1926, Act No. 103.)

The Foster-Fountain Packing Co. (Inc.) is a Louisiana corporation and operates a shrimp hulling plant in that State. It gathers shrimp from the tidal waters in the Louisiana marshes. The Sea Food Co. is a Mississippi corporation and cans and packs shrimp in its plant at Biloxi, Miss. Its product is shipped and sold in interstate commerce. The Foster Co. and the Sea Food Co. have a contract by which the former agrees to catch in Louisiana waters and deliver to the latter in Biloxi a carload of raw shrimp per month during specified periods. The supply is intended for the interstate and foreign business of the Sea Food Co.

There are located at Biloxi, Miss., plants comprising about one-fourth of the shrimp-canning industry in the United States. The waters of the Mississippi do not contain an adequate supply of shrimp and practically all that are packed there come from the Louisiana marshes. Shrimp are taken by nets dragged by power boats and are then put on larger vessels and taken to Biloxi. To prepare the meat for canning, the heads and hulls are picked off; most of them are thrown into the water, where they are consumed by scavengers of the sea, but some are made into "shrimp bran." The Foster Co. brought a suit to enjoin the enforcement of certain provisions of the shrimp act on the ground, among others, that they violated the commerce clause of the Federal Constitution. The District Court of the United States for the Eastern District of Louisiana granted a restraining order pending an application for a temporary injunction. After a hearing the restraining order was set aside and an injunction denied. An appeal was taken to the United States Supreme Court, which was allowed by the district court, which found that irreparable harm and damage would be sustained and stayed the enforcement of the act pending a determination by the Supreme Court.

The United States Supreme Court on October 15, 1928, delivered its opinion and held the shrimp act unconstitutional, on the ground that the purpose of the act "is not to retain the shrimp for the use of the people of Louisiana; it is to favor the canning of the meat and the manufacture of bran in Louisiana by withholding raw or unshelled shrimp from the Biloxi plants." The court said that "consistently with the act all (shrimp) may be, and in fact nearly all is, caught for transportation and sale in interstate commerce. As to such shrimp the protection of the commerce clause attaches at the time of the taking." The court further said that "the State might have retained the shrimp for consumption and use therein" but "by permitting its shrimp to be taken and all the products thereof to be shipped and sold in interstate commerce, the State necessarily releases its

hold and, as to the shrimp so taken, definitely terminates its control." In the course of the opinion the court pointed out that affidavits had been presented to show that by reason of favorable topographical, climatic, labor, and other conditions, shrimp taken from the Louisiana marshes may be more conveniently and economically canned at Biloxi than in Louisiana near to the source of supply; that the Biloxi plants have long constituted an important center of the industry and are largely dependent upon the Louisiana marshes for their supply; that the enforcement of the act would injure or destroy the shrimp business at Biloxi; that about 95 per cent of the shrimp obtained from the waters of Louisiana, when taken, is intended for consumption outside the State; that some shrimp bran is made from the hulls and heads in Louisiana, but all of it is shipped to Biloxi, where it is used to make fertilizer, and is worth less than 1 per cent of the value of the shrimp; and that not more than half the hulls and heads removed in Louisiana are used for any purpose because they have no market value, can not be sold or given away, and often constitute a nuisance. (Foster-Fountain Packing Co. (Inc.) et al. *v.* Haydel et al., 49 Sup. Ct. 1.)

WORKMEN'S COMPENSATION

Compensation for Occupational Diseases

THE question of compensation for industrial diseases is discussed by Dr. Carey P. McCord in an article in National Safety News, October, 1928.

Special provision for compensation of occupational diseases is made in the statutes of nine States, four of which—Minnesota, New Jersey, New York, and Ohio—have a scheduled list, while California, Connecticut, Illinois, North Dakota, and Wisconsin allow for occupational diseases in general terms. Massachusetts has in some cases construed the term "injury" to cover certain occupational diseases. In States where there is a specific schedule the effect of the law is to commit a manifest injustice, as workers who are disabled as the result of exposure to some poisonous substance or from some disease which is included in the list receive compensation but in the same factory a worker who is equally disabled as a result of his employment but from a cause which is not specified in the schedule is not entitled to compensation.

Most persons, the writer says, including both industrialists and physicians, have difficulty in limiting and defining occupational diseases. This arises from the fact that there are many border-line cases, although in the majority of instances the difference between accident and disease is fairly clear cut. As an example the case is cited of a machinist working with a lathe, who receives an injury to his fingers or hands which is clearly an industrial accident, while the same machinist on the same lathe who develops an eruption on his hands from the continued use of cutting oils is suffering from an occupational disease. While in a case like this the degree of disability might be equal in the two types of disablement, there can be no confusion as to the causation of the condition. The point is brought out by the writer that whereas industrial accidents are generally brought about swiftly, time is a factor in occupational diseases, a considerable number of years often elapsing before exposure to a harmful substance shows its effects. Although time is often the deciding factor as between an accident and a disease it is not invariably so, as, for example, failure to provide sufficient ventilation for men engaged in filling silos might result in their receiving a sufficient amount of the carbon dioxide gas generated by the green corn to cause death from oxygen deprivation. In such a case, although as much as one-half hour might elapse before death, the fatality should be regarded as due not to an occupational disease but to an occupational accident.

Opposition to coverage of occupational diseases in the workmen's compensation acts is frequently based on the fact that the causation of many conditions is more or less obscure and complicated by a variety of factors, while many members of compensation boards believe that true occupational diseases are rare. This is an erro-

neous belief, in Doctor McCord's opinion, for in practically every trade, industry, or profession there are one or many opportunities for bodily harm other than accidents. Examples of occupational diseases, showing the insidious way in which they may develop, include the "ganglia" or lumps which develop on the backs of the hands of cutters in the tailoring trade, from the use of the heavy shears; the development of a new occupational disease, tularemia, among butchers or among cooks, from handling infected rabbits; the severe bronchial asthma occurring among furriers, from the chemicals used in dyeing furs; occupational retinitis developing among motion-picture operators from watching the intensely bright projection light; and cancer of the skin among workers who treat wood blocks with tar and creosote to render them waterproof, the tar having a "carcinogenetic" action on the skin. These are examples of some of the more unusual types of infection or disease which are liable to occur in the approximately 7,000 trades or processes which are followed in this country as a means of livelihood. Not all of these trades, of course, have occupational disease hazards associated with the occupations or processes, but a very high percentage do have associated hazards.

The writer believes that compensability for industrial diseases should be limited to "characteristic" occupational diseases. Pneumonia developing in a workman engaged in a process conducive to respiratory irritation could not usually be classed as an occupational disease from the fact that in most cases it may be traced to other etiologic factors, but pneumonoconiosis developing in a worker from the inhalation of a trade dust should be regarded as a "characteristic" occupational disease. The same thing is true of arthritis which, although it may be induced in different trade processes, still does not have characteristic features which differentiate it from cases arising outside of the occupation. Doctor McCord states, therefore, that in his belief, compensation for occupational disease disability should be limited to "those pathologic states that exhibit features characteristically related to particular kinds of employment."

One of the greatest handicaps in securing appropriate legislation he considers is the general lack of training among physicians in the field of industrial hygiene. This results often in unwarranted claims for compensation being pressed with the help of the physician, with the result that an injustice is done and the compensation movement is to that extent discredited. A proper conduct of claims adjustment, he says, calls for the services of physicians highly trained in this special branch of medicine.

It appears true that occupational diseases are on the increase, and as evidence of this fact the experience of one State, Ohio, is cited. According to official reports, it is said, the scheduled occupational diseases show an average increase of 71 per cent per annum, and the nonscheduled occupational diseases show an average increase of 997 per cent per annum when a comparison is made between the past two years and the previous five years.

In conclusion Doctor McCord says: "It is to be hoped that legislative assemblies may know more about the insidiously developing occupational diseases and the injustice that will be perpetuated if this increasing source of industrial disability is further ignored."

Compensation for Silicosis

THE fact that silicosis has such a long period of latency and chronicity has made it a difficult disease to deal with from the standpoint of compensation. In view of the proposed plan of the British Home Office of granting compensation for death and total disability from silicosis in all industries in which it is a hazard, the status of compensation for the disease in the British Dominions is discussed in an editorial in the Lancet (London), September 15, 1928.

South Africa, where the hazard of silicosis was present in the Rand gold mines, is said to have been the first country to compensate for this disease, and the compensation system in that country has become closely interlocked with the system of prevention. Under the compensation plan any miner on the Rand who develops ordinary pulmonary tuberculosis is suspended from employment in order to protect the other workers from infection, and he receives compensation. South Africa and New South Wales, in relation to the county of Cumberland and to the Broken Hill mines, are said to be ahead of England in their systems of compensation for silicosis as are also the Canadian Provinces of Alberta and Ontario. A scheme of compensation was applied in England to the small refractories industries in 1918, but it was not extended to any other industry until 1927, when it was granted to metal miners. At the present time a scheme for compensation in the pottery industry[1] is in preparation, but action along this line is slow and in the meantime, it is stated, men are succumbing to this occupational hazard in such industries as stone masonry, granite cutting, quarrying, and metal mining, without receiving any compensation.

The British Home Office has now abruptly abandoned its plan of extending compensation for silicosis to one industry at a time, and has issued a comprehensive draft scheme for granting compensation for death and total disability in practically every occupation in which a silica risk is present. In addition to the industries named above, workers employed in driving hard headings or sinking shafts through sandstone rocks in coal mines are to be included, as are also millstone builders and abrasive soap makers. Under the new plan periodical medical examinations will no longer be required nor will workers in the initial stages of the disease be retired with compensation. Compensation is to be awarded only for total disability or death, but it is the plan to study each industry for the purpose of linking up preventive procedure with compensation awards. This procedure, it is considered, will lead rapidly to limitation of the silica hazard.

The plan is expected to have an indirect economic effect, as it is considered probable that the use of sandstone for building purposes is likely to cease, and that the costs on some building operations will, therefore, be increased, but it is not expected that unemployment will result, as substitute products—bricks, cement, and limestone—are all home products.

[1] See Labor Review, November, 1928, p. 67.

Recent Workmen's Compensation Reports

Iowa

THE eighth biennial report of the Workmen's Compensation Service of Iowa, covering the period ending June 30, 1928, contains recommendations by the industrial commissioner, a financial report, and the decisions of the Department of Workmen's Compensation.

An interesting recommendation found in the report is applicable to many States which have compulsory or elective laws but which have provisions so phrased as to prohibit the voluntary acceptance of the workmen's compensation act by employers and employees excluded from the compulsory and elective features of the act. The report states in part as follows:

> Personal injury on or off the premises of the employer by workmen "engaged in agricultural pursuits or in operation immediately connected therewith" is specifically barred from compensation coverage. In two cases recently arbitrated and reviewed before the industrial commissioner insurance policies have been introduced giving evidence of engagement to cover farm workers but it has been necessary to hold against the claimant. On the part of the general assembly intent is evidently to afford definite and far-reaching exemption to farm operations and kindred pursuits and the statute rather than the insurance policy must be our monitor. In the United States, with rare exception, agricultural employment is not under compensation coverage in a compulsory sense. In some States, however, provision is made for coverage at the option of the employer in agricultural pursuits. Experience leads to the conclusion that the Iowa law could extend its usefulness by permitting farmers voluntarily to come within the jurisdiction of this system by definite election on the part of each individual farmer who desires this relationship.
>
> It would seem worth while for the general assembly to consider the provisions of statute in some States to the effect that when insurance policies are made to cover employees in exempted employments such employment shall automatically classify as included in compensation jurisdiction.

An illustration of the problem which caused the recommendation to be made is a case cited as follows:

> The arbitration decision, dated May 14, 1927, holds: "That at the time of the fatal injury suffered by Arthur N. Hagen he was engaged in an 'agricultural pursuit' within the meaning of the compensation law."
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> The deceased, Arthur N. Hagen, at the time of his fatal injury was under contract with the trustees of the Farmers & Merchants Bank of Waterville, Iowa, for the operation of a threshing machine owned by said trustees and to be employed in threshing grain for many farmers in the vicinity of Makee Township, Allamakee County. August 7, 1926, while starting the engine supplying power to this threshing machine, Hagen sustained injuries which caused his death August 20, 1926.
>
> It would appear from the record that in July of 1926 a policy of insurance was issued by this defendant insurer to the aforesaid board of trustees specifically covering the employment in which the husband of this claimant lost his life. It furthermore appears that this policy was issued with the distinct understanding on the part of the assured, at least, that they would be protected against any injuries arising out of this employment.
>
> It is the contention of counsel that this contract of insurance is binding upon the Fidelity & Casualty Co., any exceptions or exemptions in the compensation law of the State of Iowa to the contrary notwithstanding.
>
> While this proposition would seem to be morally sound, it is utterly without support in the statute. Under the holding of the Supreme Court of the State of Iowa, there would seem to be no ground for the consideration of any qualification whatever of the statutory provision placing agricultural pursuits in the class of employments exempted from compensation coverage. It is so held distinctly in Slyeord *v.* Horn, 162 N. W. 253; also in Oliphant *v.* Hawkinson, 183 N. W. 805.

Hillman *v.* Eighmy et al., 208 N. W. 928, is submitted in support of claimant's contention. Subsection 3 of section 102.05 of the Wisconsin statute provides:

"3. Any employer who shall enter into a contract for the insurance of the compensation provided for in sections 102.03 to 102.35, inclusive, or against liability therefor, shall be deemed thereby to have elected to accept the provisions of sections 102.03 to 102.35, and such election shall include farm laborers and domestic servants if such intent is clearly shown by the terms of the policy."

This statutory provision makes the Wisconsin decision cited wholly consistent, in fact absolutely necessary, but the said decision is of no value whatever in this case because the Iowa statute contains no such provision as that quoted or any provision upon which such holding could be based.

It therefore becomes necessary to hold that, since the fatal injury of the deceased Hagen occurred in employment excluded from compensation coverage, no further consideration can be given this claim by the Iowa industrial commissioner. The arbitration decision is affirmed.

Pending in district court. (Hagen *v.* Hagen et al, p. 122.)

Rhode Island

IN 1927 the Rhode Island workmen's compensation act allowed employers and injured employees to reach an agreement in regard to compensation under the act, and provided that such agreement should be approved by the commissioner of labor and that any such agreement so approved should be enforceable by a suitable action or proceeding brought by either of the parties in the superior court. It was further provided that if the employer and employee failed to reach an agreement in regard to compensation under the act or if the commissioner of labor failed to approve any agreement, either employer or employee or, in case of death, the dependents entitled to compensation, could file in the office of the "clerk of the superior court having jurisdiction of the matter" a petition setting forth the facts necessary and proper for the information of the court, which court decided the merits of the controversy.

The report of the commissioner of labor made to the General Assembly of Rhode Island for the year 1927 contains the following statement:

> There were 52 petitions filed in the superior court in the year 1927; of this number, 33 asked for the payment of compensation, 8 were filed by doctors to recover for services, 3 by employers for relief, 5 for commutation of future payments, and 3 for the determination of the method of paying compensation.
>
> In the course of the year the department rendered assistance in the settlement of many cases that otherwise would have resulted in court action. This service is voluntary and effective only in cases where both claimant and employer, or those representing him, are willing to make use of it. Several small claims coming to the attention of the department were abandoned for the reason that court action would involve expense out of proportion to the amount involved. It is reasonable to believe that some of these claims have merit and should be compensated, but fail by reason of the fact that our present plan of procedure is too expensive. A modern simple procedure is recommended to correct this weakness of the law.

The Rhode Island Legislature in 1928 amended the procedure for the settlement of disputes in compensation cases in Rhode Island by providing that if the employer and employee failed to reach an agreement or if the commissioner of labor failed to approve any agreement, the employer or employee or in case of death, a dependent entitled to compensation, may file in the office of the commissioner of labor a petition setting forth the facts necessary and proper for his information, and that the commissioner of labor shall hear witnesses and in a summary manner shall decide the merits of the controversy.

If, however, "an appeal from his decision shall be taken by either party within 5 days after notice thereof or if within 10 days thereafter the terms of such order shall not have been complied with and upon complaint to him by the party in whose favor such decision is given, and such decree is entered of such noncompliance therewith, the commissioner of labor shall forthwith certify all the papers, documents, and agreements to the clerk of the superior court having jurisdiction of the matter" which court "shall proceed to hear de novo all questions of law and fact therein involved and such witnesses as may be presented by each party, and in a summary manner decide the merits of the controversy."

It is to be noted that the decision of the commissioner of labor is not final and that the superior court still has the power to hear the entire case and decide questions of fact, even though a decision on the facts has been made by the commissioner of labor.

UNEMPLOYMENT INSURANCE

First Year's Operation of the German Unemployment Insurance System

THE German system of unemployment insurance [1] had been in operation one year on October 1, 1928, and although this is too short a time to determine whether or not the system will be successful, it is of interest to examine the results of the first year's operation of the act. A report from the American vice consul in Berlin, Harry L. Franklin, dated October 5, gives an account of the principal facts connected with the administration of the act, based on reports in German publications and the personal investigations of the writer.

The unemployment insurance system is under the direction of the central bureau for employment and unemployment insurance in Berlin, which is also the central office for public employment. The bureau is a self-governing body except that a certain amount of financial control is exercised by the Federal Government as well as general supervision by the Federal Ministry of Labor. The executive board is made up of equal numbers of representatives of employers, workers, and State and communal governments, but the representatives of public bodies have no voice in the settlement of questions relating to unemployment insurance. All wage earners liable to compulsory health insurance, with a wage limit of 3,600 reichsmarks ($857.52) a year, and employees liable to compulsory old-age insurance, with a wage limit of 8,400 reichsmarks ($2,000.88), and crews of vessels are subject to unemployment insurance. The cost of the premiums is borne in equal proportions by the employers and the workers. Wages and salaries are divided into 11 standard wage classes and the unemployment benefit amounts to a stated percentage of the average wage in each class, to which is added a family allowance amounting to 5 per cent of the standard wages. Members of the unemployment funds are entitled to benefits for a period of 26 weeks after the payment of 26 weeks' premiums. If unemployment continues after the expiration of this period they are paid from the "crisis" unemployment relief, maintained by the State, for an additional period of 26 weeks, which in some cases may be even further extended.

The central bureau for unemployment and unemployment insurance began its operations October 1, 1927, with assets of 160,000,000 reichsmarks ($38,112,000), but owing to the large amount of unemployment during the winter the insurance fund was facing a deficit in the spring of 1928. With the improvement of labor conditions during the summer of 1928, however, there was an increase in the accumulations of the fund to approximately 100,000,000 reichsmarks ($23,820,000), but in view of the continuous decline in German economic conditions since that time it is feared that unemployment may be greater this winter than during the winter of 1927–28. Ac-

[1] See Labor Review, October, 1927, pp. 67–69.

cording to an estimate which appeared recently in Vorwaerts, the central organ of the Social Democratic Party, the fund may not only be exhausted but may have a deficit of as much as 50,000,000 marks. If this occurs it will be necessary to secure assistance from the Reich, which is required by the law to make the necessary loans to the fund. As an offset to the expected drain upon the resources of the fund, however, it is anticipated that the second year of the operation of the fund will show a considerable reduction in the cost of administration, although the reduction in the premiums anticipated by both workers and employers appears to be out of the question.

The change from the payment of unemployment relief out of public funds to compulsory unemployment insurance was attended with great difficulties. Under the former system there were 887 communal employment agencies, which in the reorganization were replaced by 361 employment bureaus forming a unit with the central bureau (*Reichsanstalt*), and much time was lost in trying out new methods in connection with this reorganization of the employment agencies.

Under the present law seasonal workers are entitled to the same benefits as permanent workers but it has been found that they have abused this privilege and that frequently the benefits they have received have amounted to many times the amounts of the premiums paid by them. It is claimed, too, that allowance is generally made for the risk of unemployment in fixing the wages of seasonal workers, and that the latter, especially in the country, can usually find emergency work in a period of unemployment. It is planned, therefore, either to prolong the period of contributions of such workers pending the right to benefits or to shorten the benefit period. Another factor in the increased costs of the system, it is claimed, is the waiver of the previous requirement that an insured employee should furnish evidence of his need of benefit. It is alleged by critics of the system that the unemployment of the winter 1927–28 was augmented as a result of the removal of this restriction, although the central office stated that there was an increase of only 4 per cent in the benefit claims, whereas it had been estimated that there would be an increase of 5 per cent.

The receipts and disbursements of the Reichsanstalt for the period from October 1, 1927, to June 30, 1928, were approximately as follows:

RECEIPTS AND DISBURSEMENTS OF REICHSANSTALT, OCTOBER 1, 1927, TO JUNE 30, 1928

[Conversions into United States currency made at par value—Reichsmark=23.82 cents]

Period	Receipts from contributions		Expenditures	
	Total	Average per month	Total	Average per month
1927				
Fourth quarter	$46,758,660	$15,586,220	$34,872,480	$11,624,160
1928				
First quarter	48,664,260	16,221,420	80,368,680	26,789,560
Second quarter	47,044,500	15,681,500	43,971,720	14,657,240

The establishment of a social self-governing institution made up of employers and workers is an experiment which is said to have been watched with keen interest by the German people generally, and certain features such as the organization of unemployment insurance in case of strikes and cooperation between the labor unions and employers have been worked out very successfully. It will need a longer test, however, before it can be determined whether or not the system will be of permanent benefit, although the consensus seems to be decidedly optimistic as to the final results. One of the most serious disadvantages of the system is the heavy demands upon the time of the individual employers and employees who are members of the board of executives or who hold honorary positions in the various local and State offices. At present, it is estimated, there are about 20,000 such persons engaged in the administration of these offices, but the opinion prevails that with further experience in the operation of the system it will be possible to dispense with a large number of assistants from the ranks of private enterprise, both employers and employees, without affecting the smooth and efficient functioning of the system.

HOUSING

Provision of Cheap Dwellings in Belgium [1]

A REPORT for the year 1927 of the activities of the Belgian National Cheap Housing Society, which is the organization through which all measures are taken in Belgium to provide houses for the poorer classes of the population, shows that there were 253 approved local societies in active operation during the year. These societies, which are financed by the State, Provinces, local authorities, and the public welfare committee made up of industrial employers and private individuals, carry out the actual building under the supervision of the national society. At the end of the year nearly 30,000 rentable buildings had been built or were in process of construction and 22,165 had been rented, while 4,741 houses had been sold, all but a few of which were sold under the State bonus system, which provides for bonuses varying according to the district and the family responsibilities of the purchaser. More than three-fourths of the proceeds of these sales had been applied at the end of the year toward the construction of new dwellings.

By the close of 1927 the total number of houses either built or being built was 33,578, of which 26,040 were one-family houses. Although the number of houses constructed was considered a remarkable achievement, the number of dwellings urgently needed in 1927 was estimated to be 100,000, and since that date this figure has increased with the growth of the population. The national society was empowered, therefore, by an act of July 22, 1927, to raise a 6 per cent loan of 110,000,000 francs ($3,058,000), under Government guaranty, which will cover the cost of 3,200 additional dwellings.

The first loan was so successful that proposals were made at the beginning of 1928 to float a new loan of 100,000,000 francs ($2,780,000) but this has since been increased, by a Government proposal, to 300,000,000 francs. One-third of this amount will be used to finance a direct attack on the slum problem, so that people evicted from condemned houses will be housed in dwellings which, though plain and small, insure healthful living conditions, and measures will be taken to insure that for every house built under this scheme a condemned building will be demolished by the local authorities. One-third of the amount will be used to finance the construction of cheap dwellings of the type already built and the remainder will be deposited in a special fund to cover the cost of bonuses granted to private purchasers or builders of cheap dwellings.

Because of the enormous demand for houses and the fact that the national society is necessarily restricted by its cost to the State, the Government has taken steps to encourage the construction of cheap dwellings by private initiative, and a system of bonuses has been instituted designed to make it possible for individuals to finance the

[1] International Labor Office. Industrial and Labor Information, Geneva, Nov. 19, 1928, p. 246.

construction of their homes. The right to receive a bonus is restricted to individuals whose income and property do not exceed certain stated amounts and the value of the property is also fixed for different localities. As a further incentive to the construction of cheap dwellings an act of June 10, 1928, exempts from the property tax for a period of 10 years all houses, approved by the cheap housing committees, the net rent valuation of which does not exceed a fixed sum varying according to the size of the town, provided no other bonus or credit facilities have been granted in connection with such a house. This exemption is extended to multiple-dwelling houses and to premises which include business annexes.

COOPERATION

Finnish Cooperative Boarding Houses

THERE are some 60 to 80 Finnish cooperative boarding houses, according to the 1928 yearbook of the Northern States Cooperative League. Most of these, according to the report, are "small, unincorporated, and rather unstable enterprises." Their instability is due to the fact that the members are usually single men who move from locality to locality to find work or to better their positions. This impermanency of membership is shown by the fact that in some cases only from 5 to 10 per cent of the shareholders are boarding at the house, and in hardly any case where the society is several years old do the boarders form more than 30 or 35 per cent of the whole membership. "The rest have either moved to some other locality or, in a few cases, have married and established their own individual households."

The table below shows for 13 boarding associations the membership, business, capital, and assets in 1926:

STATUS OF FINNISH COOPERATIVE BOARDING HOUSES AND HOTELS, 1926

Name and location	Year established	Number of members	Volume of business	Share capital	Total assets
Toivola Co., Cloquet, Minn	1910	280	$30,420	$7,000	.....
The Rentola Co., Duluth, Minn	1913	160	15,714	9,272	$14,572
Toverila Co. (Inc.), Duluth, Minn	1909	338	64,554	1,690	13,242
Junula Boarding Co., Ely, Minn	.....	40	17,000	.....	.....
Tarmo Trading Association, Eveleth, Minn	1918	64	22,006	2,205	9,122
Toveri Cooperative Association, Gilbert, Minn	1918	166	6,053	1,660	5,630
Workers' Cooperative Club, Allouez, Wis	1919	50	16,486	1,475	3,623
Tarmo Co., Superior, Wis	1912	252	30,885	4,270	22,784
Cooperative Toivo Co., Detroit, Mich	1919	186	52,721	1,850	61,440
Workers' Home, Ironwood, Mich	1919	24	10,884	240	860
Finnish Cooperative Boarding House, Cleveland, Ohio	1916	129	43,570	1,296	22,530
Tarmo Club (Inc.), New York, N. Y	1922	152	100,000	.....	35,000
Finnish Boarding House, Timmins, Ont	1914	35	18,209	.....	.....
Total	.....	1,876	428,502	30,958	188,803

Ten of the 13 organizations above named own real estate, the aggregate holdings being $167,309. In four cases the value of the land and buildings exceeds $15,000 and in one case amounts to $56,788.

Cooperative Oil Associations in North Central States

THE Northern States' Cooperative League yearbook for 1928 contains some interesting data as regards the cooperative oil associations in the Northern States.

There are now 61 associations in Minnesota, 22 in Wisconsin, 15 or more in Iowa, and several in the Dakotas. Twenty-seven of these

had sales in 1927 amounting to $1,968,698 and a net gain of $224,336, and 30 associations had a combined paid-in capital of $320,223.

Most of the 61 cooperative oil associations in operation in Minnesota are in the southern part of the State. Of these, 19 furnished membership figures, the average being 360 members per association. The paid-in share capital averages $9,611 per association.

According to the State oil inspector's report, 43 of the associations sold 10,782,000 gallons of gasoline and 3,273,000 gallons of kerosene during 1927. These associations have had a remarkable success. Thirty-eight of them handled more than 50 per cent of the gasoline, kerosene, and distillate shipped into the towns where they were operating, and 21 handled more than 75 per cent.

The yearbook states that "Cooperative oil companies have not found it necessary to advertise extensively. The patronage dividend checks have been their greatest advertisement." The following data show for four of the older companies the dividend paid on purchases (in addition to the interest paid on capital stock):

PATRONAGE DIVIDENDS OF FOUR COOPERATIVE OIL ASSOCIATIONS IN MINNESOTA, 1922 TO 1927

Year	Association A	Association B	Association C	Association D	Weighted average
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*
1922	5.9	3.6	----------	----------	5.0
1923	7.4	6.3	----------	----------	7.0
1924	5.0	10.6	4.1	----------	6.6
1925	13.2	10.5	5.6	9.0	9.7
1926	14.7	8.1	8.6	12.5	11.6
1927	12.0	7.8	8.9	9.6	10.0

If the earnings were computed on the share capital (as in private profit firms) instead of on sales, the showing is still more remarkable. The report states that in 1927 eight associations earned an average of 123 per cent on their capital stock and 40 an average of 68.2 per cent. "This showing will not be equaled in 1928 as there have been severe price wars in cooperative oil territory, but the purpose of the cooperative organizations will be attained nevertheless."

It is interesting to note that practically all of the price cuts have been in cooperative oil territory and have been brought about by competitors. The strength of the cooperative lies in the fact that the consumers get the profits regardless of the price. The cooperatives do not cut price but follow their competitors. In one case where the competition put the price of gasoline several cents below cost, the cooperative closed its doors for a few weeks until the price came back to normal. In this case there was no difficulty in getting the trade back and they had enjoyed buying their gasoline below cost.

Condition of Farmers' Cooperative Movement

THE annual report of the Secretary of Agriculture for the year 1928 contains the following statement which sums up the general situation of the agricultural cooperative movement:

Cooperative organization among the farmers of the United States, as is well known, has developed greatly in recent years. Naturally its progress has not been uniform. Setbacks as well as advances have been recorded. But there remains a remarkable net gain, the value of which can not be estimated wholly

in terms of business done, membership gained, or savings effected. It includes also such important, if not easily measurable, results as a widespread realization among farmers that success in agriculture requires efficient selling as well as efficient production. Hereafter this realization will play an increasing part in the adjustment of output to market requirements, which must play a large part in any rational program for the solution of the surplus problem.

Agricultural cooperation is sometimes charged with responsibilities that do not belong to it. When markets are depressed by overproduction it is difficult even for the most efficient cooperative organization to obtain satisfactory prices. This difficulty is sometimes considered evidence that cooperation does not work. But such an attitude is unjustified. Cooperation can not correct all the basic difficulties of agriculture and is not designed to do so. It may influence the volume of production. But the control of conditions such as exist in the California dried-fruit industry and in the marketing of potatoes this year does not fall directly within the sphere of cooperative responsibilities. The remedy for the surplus problem will necessarily transcend the powers of the cooperative associations. For the present our cooperative organizations must be judged as marketing concerns operating sometimes under favorable, and sometimes under unfavorable, conditions. Cooperative marketing aims to give the farmer an efficient and economical marketing system, while at the same time promoting the adjustment of production to market needs. It emphasizes quality output, and is perhaps the chief influence in the standardization, handling, packing, and processing of farm commodities. It sometimes favorably modifies the purchasing practices of commercial agencies. These and similar activities are the true standards by which cooperative marketing should be judged.

WORKERS' EDUCATION AND TRAINING

A Library Adult Education Program

THE libraries of the United States have adopted a definite program of cooperation with other agencies for adult education. This announcement was made by M. S. Dudgeon, librarian of the Milwaukee Public Library, at the 1928 meeting of the National Education Association, Minneapolis, July 1–6 1928.[1] The three steps in this program are:

1. To form in each library a well-equipped bureau of information on adult education, which will make it possible for that library to advise every adult in the community who desires to find out when and how he can receive instruction from one of the numerous agencies for adult education.

2. To render the best possible service to other agencies for adult education, by sending books to places where classes are being carried on, by reserving books for adult education students, and in other ways—in brief, to make the public library the school library and the college library of every other adult education in the community.

3. To provide a "reader's adviser," whose function is to confer with serious-minded readers, to write out courses for them adapted to their individual requirements, and to remind delinquent readers that their next books are available for them. In other words, the adviser diagnoses the prospective reader's mentality, presents him with a prescription, and sees that he takes it.

Mr. Dudgeon points out that the above program is not merely theoretical. Some libraries are following it completely and nearly all other libraries of any size have put at least parts of the scheme into actual operation.

It is not intended that this new library service should duplicate or substitute other agencies for adult education or that libraries should be transformed into schoolhouses or librarians be changed into formal teachers. The libraries' duty, Mr. Dudgeon declares, "lies solely with the printed page. It is their ambition that every adult education student consider and use the public library or the State library as his school library."

Need for Evening Schools

IN A recent discussion of adult education from a national viewpoint, L. R. Alderman,[2] specialist in adult education of the United States Bureau of Education, stressed the need of evening schools which enable adults to secure formal public education. To such schools, he said, may come native citizens who have had little or no education. According to the 1920 census there were then in the United States

[1] National Education Association. Proceedings of the sixty-sixth annual meeting. Washington, 1928, pp. 295–6.
[2] Idem, pp. 272–276.

3,084,733 native-born persons 10 years of age or over who were illiterate. Of the more than a million and a half men in the United States draft for the World War, 31 per cent were unable to take the alpha test, the American Academy of Science reports. This test calls for ability to read in simple English.

Immigrant men and women may also have recourse to the public evening schools for preparation for citizenship. The 1920 census shows 1,763,740 foreign-born white illiterates 10 years of age or over. These people could not write in any language.

The public evening school may also draw great numbers of young people beyond the compulsory school age who have entered the wage-earning world to aid in family support. Despite the rapid multiplication of secondary schools, over 50 per cent of the boys and girls of high school age are out of school. For those who are obliged to work during the day the evening school is the only available school.

In the great majority of school districts there are no evening schools; school authorities who make no adequate provision for evening schools may unconsciously do grave injustice to those to whom a night school is the only source of education. Moreover, evening schools are so much less expensive than day schools that "it would seem that every school system, where there is need for evening schools, would make a serious attempt to provide them."

Take for example, the case of Tom and John. Tom's family has no need of his earnings. He, therefore, is able to go to the day high school for four years at an average expense to the district of $173.72 per annum. Later his four years at the State university cost the State an average of $593.75 a year. The total public tax money expended for Tom's eight years of education is $3,069.88. John, on the other hand, must contribute to his family's support and his only opportunity to go to school is after his day's work. Should he go to night school for eight years, the public funds expended for his education would amount to only $80, or an average of $10 per annum. As there are in the United States more Johns than Toms, school authorities should strongly advocate such schools as will make it possible for this larger class of youths to have "their chance for development and service."

To the evening schools also may come that large and ever-growing group of mature people who need some guidance in the study of vocational or cultural subjects, that they may be better adjusted to their complex and constantly changing environment. To the evening schools may come those who need help in the wise use of their increased leisure time. Many of these are surfeited with passive amusements and are hungry for the worth-while things of life.

To the evening schools may come parents, young and older, who have discovered that they, as parents, have unsurpassed opportunity in the care of their children to give them a mind set and to establish in them habits that will make them more effective and happier human beings. Parents are asking for classes that they may learn how to be better parents.

In Mr. Alderman's judgment, the evening school gives promise of becoming "one of the greatest educational institutions of our times." It will make it possible for school authorities to reach the adult family members whose influence upon the developing child is probably greater than "the public school systems and all other public institutions combined. Hence, if our purpose were merely to teach all the children of all the people, we would find that adult education is necessary in order to do this effectively."

From a national standpoint, he reports, the evening school is not being given the attention it merits. In certain localities, however, schools of this character have been established which clearly indicate what may be accomplished in this connection when school authorities give due consideration to the important matter. As said above, the majority of school districts are without evening schools. Moreover, in a number of districts where evening schools are being successfully operated there is no certainty of their continuing to operate. Mr. Alderman asks: "Should not the evening school be made a regular part of the public-school system?" By the collection of student fees, evening schools in a large number of districts have been made self-supporting. In fact, some highly successful schools are maintained in this manner. In the opinion of this expert on adult education, "the most important matter is, not how the school is supported, but that evening schools be maintained." Experience has shown that adults in substantial numbers will patronize evening schools even if they are obliged to pay instruction costs. "Just why the public school trains for citizenship the child of nine and not the man of 21 years of age" is a question difficult to answer.

Apprenticeship Law of Ontario

THE Province of Ontario has recently enacted an apprenticeship law, the terms of which are given in the Wisconsin Apprentice in its issue for November, 1928. The law at present applies only to the building trades (including bricklaying, masonry, carpentry, painting and decorating, and plastering), but other trades may be added by the Minister of Labor, after suitable investigation, undertaken either upon his own initiative or upon petition from at least 25 employers in a given trade. The enforcement of the act is intrusted to an inspector, to be appointed by the lieutenant governor, who, with his assistants, is expected to take all possible steps to arouse and promote interest in apprenticeship, to keep a register of all contracts of apprenticeship, to collaborate with educational authorities in the training of apprentices, and generally to make the act as widely useful as possible.

After the adoption of the act a minor may not lawfully be employed for more than three months in any trade included in the list, except under a contract of apprenticeship. Such a contract must be in a form prescribed by the act, must be approved by the inspector and apprenticeship committee, must cover a period of at least two years, and must be signed by the employer, the apprentice, and the parent or legal guardian of the apprentice. Subject to the approval of the minister, such a contract may be terminated by mutual consent of all parties or may be canceled by the inspector upon good and sufficient reasons adduced by either the employer or the apprentice.

The lieutenant governor is empowered to establish a provincial apprenticeship committee, composed of a chairman and equal numbers of employers and employees, who are to advise the Minister of Labor on all matters concerning apprenticeship. He may also appoint apprenticeship committees for any defined areas, and prescribe their functions in regard to fixing the length of the apprenticeship

period, the conditions under which apprenticeship may be entered, the standard of education to be enforced, the educational classes to be attended by the apprentice, the course of training to be given in a designated trade, the number of apprentices permitted to each employer, the issuance of certificates to apprentices who have completed their term, the hours of labor and rates of wages for apprentices, and similar matters. One important function is to recommend "such methods of assessment of employers as may be deemed necessary to maintain a system of apprenticeship in any industry or designated trade."

Violation of any of the provisions of the act is punishable by a fine of not less than $10 or more than $100.

LABOR ORGANIZATIONS AND CONGRESSES

Convention of American Federation of Labor, 1928[1]

THE forty-eighth annual convention of the American Federation of Labor was held at New Orleans, November 19–28, 1928. According to the report of the secretary, the average paid-up and reported membership for the year ending August 31, 1928, was 2,896,063—an increase of 83,537 compared with the membership of the preceding year. There were probably at least 500,000 additional members on strike or unemployed, for whom the national and international organizations were not required to pay a per capita tax to the American Federation of Labor. For the year ending August 31, 1928, the total funds (balance and income) were $797,080, and the total expenses $496,971, leaving a balance of $300,109.

Report of Executive Council

THE report of the executive council reviews the progress of the American Federationist and the workers' status. The latter is discussed first from the economic viewpoint, and statistics are presented showing what trade-unions accomplish for their members in the reduction of daily and weekly hours, the increase of wages, and provisions for unemployment, sickness, disability, old age, and death, such provision in the form of benefits and pensions by standard national and international unions in 1927 aggregating nearly $28,270,000.

Other developments on which the council reports progress are research work under the auspices of the American Federation of Labor, union-management cooperation, and extension of the 8-hour day and the 5-day week.

Special emphasis is placed on the displacement of workers by machinery and the need of preventive measures in solving the unemployment problem.

Attention is called to the reports of special organizing campaigns as suggestive for future activities along these lines.

Nearly two pages of the report are devoted to the workers' education movement; among the statements in this section is the following:

> In the development of workers' education a number of facts have become clear. The first of these is the importance of restricting interference with the trade-union's final and absolute right to determine its own policy. This principle is inherent in the philosophy of the American trade-union movement; it is the basis of its insistence on voluntarism and local autonomy. It is the expression of self-determination by the trade-union, mentally as well as economically.

Under the caption "International labor relations," the council reports no progress in reaching an understanding with the International Federation of Trade-Unions.

[1] American Federation of Labor. Report of proceedings of forty-eighth annual convention (advance copy) and report of the executive council of the American Federation of Labor to the forty-eighth annual convention.

Old-age pensions and proposed anti-injunction legislation are taken up at length.

Among other subjects treated are the following: Child labor, company unions, labor banks, cooperation with the American Bar Association, and communistic attempts to secure control of trade-unions. The report concludes by an urgent appeal through the slogan "double trade-union membership in 1929."

New Problems for Organized Labor

EPITOMIZING the philosophy and objective of the American Federation of Labor as human betterment throughout the world, President Green, in his opening address, pointed out that organized labor must struggle with new problems peculiar to this day and age. In this connection he said:

> We realize that there is no question more serious than this one of machine displacement, the development of mechanical devices and power to the point where the machine operated by the few is so serving as to displace hundreds of working men and women. So we stand as a challenge to this thing, demanding that human beings shall first be protected above and beyond any material thing or any mechanical device, for the American Federation of Labor will not permit a human scrap heap to be created in America.

Excerpts From Some Other Addresses

MANY prominent speakers addressed the delegates. A few of the statements in the Secretary of Labor's convention speech are given below:

> Labor-saving machines are rapidly becoming "leisure-producing" machines. I believe they have counted a very great deal in the movement away from the long day and the 7-day week. The long day and week in American industry is another thing as dead as the dodo. * * * I believe that the business men of the future will be known and honored not alone for their success in building up gigantic industrial units and in securing a good return to investors and management, but rather because of their constructive ability to pay liberal wages for reasonable hours of work.

Referring to the restrictive immigration legislation adopted during his term of office, the Secretary said:

> I think that was the greatest piece of legislation that has been enacted in America during the past 50 years for the benefit of the American workingman.

Rev. J. W. Maguire, president of St. Viator's College, Bourbonnais, Ill., spoke on injunctions. He said that—

> all unconsciously but very really, the liberties of the citizens of the United States are certainly and surely being taken away from them by the unlimited use of the injunction by courts of equity in the United States, and that the American Federation of Labor is, so far as I know, with the possible exception of the American Civil Liberties Union, the only organization that is really concerned in combating this tremendous menace to our constitutional rights and liberties.

The week-end conferences which have been held under the auspices of the Workers' Education Bureau and the "important by-products" of the conferences were reviewed by Spencer Miller, jr., secretary of that bureau. He also referred briefly to the notably successful scheme of cooperation between the California State Federation of Labor and University Extension Division of the University of California and expressed the belief that the executive committee of his bureau would be glad to cooperate with the proposal of the

executive council of the American Federation of Labor in regard to the appointment by the president of the federation of a commission on workers' education.

The reports of the fraternal delegates from Canada and Great Britain contained interesting data on certain recent labor developments in their respective countries.

Approved Resolutions and Decisions

THE position adopted by the convention on some of the numerous measures submitted for its consideration is indicated below:

Concerning the civil service.—The executive council was instructed to cooperate with representatives of affiliated organizations of Government employees—for the elimination of speeding-up practices, in securing an extension of the Saturday half holiday in the Government service, and in bringing about the establishment of a civil service court of appeals.

The executive council was directed to cooperate with the National Federation of Federal Employees with a view to securing the passage of legislation standardizing annual and sick leave for civil-service employees other than postal workers. The establishment of adequate salaries for the United States Steamboat Inspection Service was favored. Support was pledged for the Dale-Lehlbach civil service retirement bill (S. 1727), providing more liberal retirement features.

For freedom of speech.—A declaration was made in favor of repealing such laws as the executive council and conventions of the American Federation of Labor found to be contrary to the principles of "human freedom, as enunciated in the thirteenth amendment of the Constitution of the United States against slavery and involuntary servitude and in the constitutional provisions for free speech, free press, and free assemblage."

Workers' education.—Careful study of cooperative part-time education was recommended in order to ascertain the facts concerning the new development of vocational education and in order that the workers may be provided with the "highest type of educational opportunities under best conditions."

The representation of labor on educational boards and governing bodies of educational institutions was advocated, in order that the growing adult-educational movement may be responsive to the workers' needs and fair in its presentation of the history and aims of labor.

Recommendation was made that all national and international unions, State federations, central labor bodies, and local unions extend all possible aid to insure the success of week-end labor conferences engineered by the Workers' Education Bureau.

It was agreed that the Workers' Education Bureau "should receive the continued support of the entire labor movement."

A resolution was referred to the executive council proposing the establishment of a national labor college for workers' education.

On the seventh day of the convention a protracted discussion centered in the fact of the executive council's advising national and international unions to withhold their financial support from Brookwood College.

The following two paragraphs are taken from the statement at this session by President Green:

> Some of our national and international unions supplied scholarships to Brookwood. They paid out of their funds the tuition fees and the expenses incident to the scholarships supplied at Brookwood College, and when these international unions found that the students were being taught doctrines antagonistic to the American Federation of Labor and were living in an atmosphere antagonistic to our movement, they withdrew the scholarships.
>
> In view of that fact, was it not proper for the American Federation of Labor to inquire into the cause of it all, the basis for it all? When we made the inquiry and found that these national and international unions were justified in withdrawing these scholarships, were we not within our rights in communicating with national and international unions, advising them to withhold financial support to this institution? Can we afford to use trade-union funds for the purpose of educating young men in an institution to return home and oppose the movement that supplies the funds? Would that be consistent?

The discussion was resumed on the eighth day and closed with the adoption of a motion that the "convention indorse the position taken by the executive council on the Brookwood College affair."

International relations.—Continuation of the effort to reaffiliate with the International Federation of Trade-Unions was recommended, such reaffiliation to be upon the basis previously decided upon by the executive council and conventions of the American Federation of Labor.

The ratification by the United States Senate of the multilateral treaty for the renunciation of war was favored.

Additional appropriation for the United States Bureau of Labor Statistics.—A recommendation was approved that the executive council be authorized to urge upon Congress that a sufficient appropriation be made for the United States Bureau of Labor Statistics "to compile accurate statistics on the subject of unemployment and employment, including labor turnover, and changes of employment from year to year."

Other Adopted Declarations

AMONG many other measures approved at the convention were:

A declaration that the 5-day week was not only economically and socially sound but necessary for commerce and welfare;

A recommendation that the executive council continue to back the bill for the coordination of the public health activities of the Government.

A denunciation of the practice of refusing employment to middle-aged workers and a proposal for an investigation into this subject, including the use by employers of group insurance for ulterior purposes.

A request that the executive council call a conference in the interest of the organization of labor in the Southern States.

Officers for 1928–29

WILLIAM GREEN was reelected president and Frank Morrison and Martin F. Ryan (president of the International Brotherhood of Railway Carmen) will again serve, respectively, as secretary and treasurer.

Toronto was chosen as the convention city for 1929.

Congress of Spanish General Federation of Labor[1]

THE sixteenth congress of the Spanish General Federation of Labor was held in Madrid from September 10 to 15, 1928, having 591 delegates present, representing 681 sections and 141,209 affiliated members.

Among the resolutions adopted by the congress were the following: Favoring the establishment by law of minimum wage rates for all workers, the prohibition of piecework, and the amendment of various provisions relating to home work; favoring improvement in the functioning of the factory inspection service; favoring the establishment of an industrial court in every large town; extension of the workmen's compensation law to cover all classes of workers, including agricultural workers, domestic servants, and industrial workers, and to make occupational diseases compensable as are industrial accidents; indorsing proposals relating to old-age, sickness, and unemployment insurance; favoring the prohibition of the employment of young persons under 14 years of age, of overtime work for persons under 16 years of age, and of night work, underground work or unhealthful employment for young persons under 18 years. The congress approved also a resolution to the effect that women should not be employed in dangerous or unhealthful work and that young persons under 16 years of age must submit to a medical examination before being employed. As regards agricultural workers, the congress favored the observance of the 8-hour day, legislation fixing wages according to the cost of articles of prime necessity, and the improvement of their housing conditions.

[1] International Labor Office. Industrial and Labor Information, Geneva, Oct. 15, 1928, p. 63.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in November, 1928

DATA regarding industrial disputes in the United States for November, 1928, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

The bureau is dependent upon trade journals, newspapers and labor periodicals for notices of strikes. These reports are followed up by correspondence and when necessary by personal visits of representatives of the Conciliation Service or of this bureau.

Table 1 is a summary table showing for each of the months—January, 1927, to November, 1928, inclusive—the number of disputes which began in those months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1927, TO NOVEMBER, 1928

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
January, 1927	37	18	5,915	2,287	58,125
February, 1927	65	45	9,756	5,717	115,229
March, 1927	74	67	13,142	8,182	214,283
April, 1927	87	88	202,406	199,701	5,265,420
May, 1927	107	116	22,245	200,702	5,136,006
June, 1927	80	88	18,957	196,323	4,863,345
July, 1927	65	63	33,994	199,287	5,308,123
August, 1927	57	53	8,150	198,444	4,999,751
September, 1927	57	58	12,282	196,829	4,945,702
October, 1927	50	58	13,024	82,095	2,724,117
November, 1927	27	51	5,282	82,607	2,040,140
December, 1927	28	54	4,281	81,229	2,129,153
January, 1928	43	62	18,263	81,676	2,135,092
February, 1928	47	61	33,602	104,883	2,155,559
March, 1928	34	63	7,145	78,362	2,343,415
April, 1928	62	70	143,834	134,382	4,884,430
May, 1928	72	74	15,138	136,094	3,526,608
June, 1928	40	64	20,941	134,406	3,580,719
July, 1928	53	60	17,232	134,102	3,365,803
August, 1928	57	59	8,279	129,210	3,577,599
September, 1928	48	48	8,041	63,650	2,605,713
October, 1928 [1]	51	51	27,080	44,064	1,328,484
November, 1928 [1]	30	55	5,194	43,273	1,101,111

[1] Preliminary figures, subject to change.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in September, October, and November, 1928, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN SEPTEMBER, OCTOBER, AND NOVEMBER, 1928

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	September	October	November	September	October	November
Broom and brush workers	1			100		
Building trades	8	4	4	920	214	204
Chauffeurs and teamsters		3	3		113	411
Clerks and salesmen		1			750	
Clothing workers	8	8	4	419	462	914
Farm labor		2	1		175	80
Furniture workers	7	2		137	27	
Glass workers			1			112
Metal trades	2	2	1	56	36	80
Mine workers	9	15	3	5,178	14,012	1,650
Motion-picture operators, actors, and theatrical workers	7	7	1	843	106	8
Pottery workers		1	1		173	50
Printing and publishing		1	2		10	213
Rubber workers		1	1		900	800
Stationary engineers	2			27		
Teachers			1			11
Textile workers	3	2	7	346	3,050	661
Miscellaneous	1	2		15	7,052	
Total	48	51	30	8,041	27,080	5,194

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in November, classified by number of workers and by industries:

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN NOVEMBER, 1928, CLASSIFED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in November, 1928, involving—			
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers
Building trades	1	2	1	
Chauffeurs and teamsters	2		1	
Clothing workers		2	1	1
Farm labor		1		
Glass workers			1	
Metal trades		1		
Mine workers			1	2
Motion picture operators, actors, and theatrical workers	1			
Pottery workers		1		
Printing and publishing	1		1	
Rubber workers				1
Teachers	1			
Textile workers	2	3	2	
Total	8	10	8	4

In Table 4 are shown the number of industrial disputes ending in November, by industries and classified duration:

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN NOVEMBER, 1928, BY INDUSTRIES AND BY CLASSIFIED DURATION

Industry	Classified duration of strikes ending in November, 1928			
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	15 months and less than 16 months
Building trades	3			
Chauffeurs and teamsters	2			
Clerks and salesmen			1	
Clothing	1			
Farm labor	1			
Glass makers	1			1
Mine workers	1		3	
Motion picture operators, actors, and theatrical workers	1			
Pottery workers	1			
Printing and publishing	2			
Rubber workers	2			
Stationary engineers			1	
Textile workers	4		1	
Total	19		6	1

Principal Strikes and Lockouts Beginning in November, 1928

TIRE workers, New Jersey.—The Michelin Tire Co., Milltown, N. J., manufacturers of automobile tires and tubes, was affected by a strike of about 800 workers from November 7 to November 14, 1928, because of a wage reduction of from 3½ to 5 per cent. A compromise was arrived at on the basis of a wage cut of 2½ per cent.

Taxicab drivers, Maryland.—A disagreement over wages, working conditions and union recognition, caused a strike of approximately 387 taxicab drivers against the Yellow Cab Co. in Baltimore from November 8 to November 14.

The spokesman for the men said they were inadequately paid under the commission system. From their percentage of the fares they were required to pay 12 cents a gallon toward the cost of gasoline consumed. He said the strikers wanted 35 per cent of fares and were willing to pay half the price of the gasoline at the wholesale rate paid by the company, or 33⅓ per cent flat without any charge for gasoline.

The president of the company issued a statement in which he said that the company formerly paid a straight commission of 30 per cent, but in order to encourage steadiness and reliability it voluntarily increased the commission pay for a full week's work to 33 per cent and for the same reason reduced the commission for a man working less than a full week to 27 per cent. In addition, bonuses were established to encourage ambitious drivers.

The company declined to grant union recognition, but other demands were adjusted satisfactorily.

The agreement reached between the company and the men through a committee on November 12 provides in part that—

For a period of two months from this date all drivers are to be paid 33 per cent of their manifests. In the event that after this period the attendance is unsatis-

factory the old rates will apply—that is, 33 per cent for a full 6-day week and 27 per cent for less than a week, except that if, in the judgment of the officers, a man is unavoidably absent he will receive full 33 per cent commission.

All bonuses to drivers to be eliminated.

The company to make its best efforts to reduce the cost of gasoline to drivers to the lowest point possible consistent with the successful operation of the company. Subject to the approval of the board of directors, the cost of gasoline to drivers from this date will be 9 cents per gallon and will be adjusted from this base monthly in accordance with the changes in the market price.

Shoe workers, Massachusetts.—In protest against reductions in wages ranging from 9 to 20 per cent as recommended by the State board of conciliation and arbitration, 500 shoe workers, members of Local 289, Boot and Shoe Workers' Union, at five shoe factories in Lynn went on strike November 20. The affected companies, members of the Lynn Shoe Manufacturing Bureau, were the Unity Shoe Co., Strout, Stritter & Co. (Inc.), Standard Shoe Co., Washington Shoe Co., and the Walden & Perry (Inc.). The companies have an agreement with the union that was planned to prevent strikes and lockouts. Many operatives in the city, whose work depends on processes usually done by the strikers, were forced into idleness, so that the strike affected some 3,000 other shoe workers.

The strike was reported to be unauthorized or "illegal," being a violation of agreement.

Walden & Perry (Inc.), and the Washington Shoe Co. agreed not to enforce the reductions and the strikers returned to work at these plants November 22.

The Standard Shoe Co. resumed operations November 24, after granting the strikers' demands for continuance of the old wage scale.

Employees of the Unity Shoe Mfg. Co. (Inc.), which was preparing to leave the city, returned to work November 28, accepting a temporary decrease, but with the understanding that the matter is to come up before the board again.

Employees of Strout, Stritter & Co. (Inc.), also returned on November 28, the company having waived the decision of the board.

Printers, newspaper, New York.—Having refused to meet the demands of their compositors, members of Albany Typographical Union No. 4, the Albany newspapers, Knickerbocker Press, Albany Evening News, Albany Times-Union, and Albany Sunday Telegram, were confronted by a strike when the members of this local, to the number of about 197, walked out at 6 o'clock on the afternoon of November 23. The strike was sanctioned by the international union, and was called to enforce demands for a reduction of three hours a week—from 48 to 45—and a $1 per week increase each year for three years. The publishers were willing to grant the 45-hour week, no increase the first year, but $1 for each of the following two years. The printers refused to accept this. They also refused to arbitrate.

The old agreement, which expired on May 31 last, paid a minimum for regular hours of $51 a week, the maximum for journeymen running as high as $60 a week. Soon after May 31 negotiations were started, but failed to result in a settlement.

Early in December the publishers were reported as running on the open-shop basis. On December 11 the papers were published under what their publishers described as entirely normal conditions, the printers having lost the strike.

Principal Strikes and Lockouts Continuing Into November, 1928

SILK workers, New Jersey.—The strike of silk workers in Paterson which began on October 10 is still running in part, being about two-thirds settled in favor of the workers, according to press reports.

Bituminous coal strike.—Preceding issues of the Review have described the progress of the major suspension of April 1, 1927, which, it is understood, is still partly in effect in Ohio and Pennsylvania.

Conciliation Work of the Department of Labor in November, 1928

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 32 labor disputes during November, 1928. These disputes affected a known total of 16,097 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On December 1, 1928, there were 27 strikes before the department for settlement and in addition 16 controversies which had not reached the strike stage. The total number of cases pending was 43.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, NOVEMBER, 1928

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
					1928	1928		
Pennsylvania Coal Co., Pittston, Pa.	Strike	Miners	Working conditions	Adjusted; all returned	Nov. 1	Nov. 5	1,714	
Cambridge Rubber Co., Cambridge, Mass.	do	Rubber workers	Wage cut	Adjusted; accept cut; returned without discrimination.	Oct. 29	Nov. 7	1,800	
Empire Weaving Co., Lee Park, Pa.	do	Silk weavers	Wages cut one-half cent per yard; proposed elimination of bonus.	Adjusted; bonus to be continued on good material; not on doubtful material.	Nov. 5	Nov. 9	350	
38 broad silk companies, Paterson, N. J.	do	do	Asked 10 per cent increase, 8-hour day, 44-hour week, and recognition of union.	Adjusted; allowed as asked	Oct. 10	Nov. 1	425	41
21 broad silk companies, Paterson, N. J.	do	Weavers, warpers, etc.	do	do	do	Nov. 28	214	21
32 broad silk companies, Paterson, N. J.	do	Weavers and warpers	do	do	do	Oct. 20	622	40
Nassau Daily Review, Rockville Center, N. Y.	Lockout	Compositors	Renewal of agreement with wage increase.	Pending	Nov. 5		14	50
Pantages Theater, Kansas City, Mo.	Controversy	Musicians	Signing contracts with musicians.	Adjusted; contracts signed	Nov. 10	Nov. 15	8	4
Yellow Taxicab Co., Baltimore, Md.	Strike	Taxicab drivers	Asked 33 to 35 per cent of receipts, union recognition, etc.	Adjusted; majority of drivers returned to work; some wage adjustments and other concessions by owners.	Nov. 8	Nov. 10	560	32
Pantages Theater, Fresno, Calif.	Controversy	Operators	Wages	Adjusted; allowed $60 for silent, $72 per week for sound pictures.	Nov. 7	Nov. 13	5	50
Garages, Greater New York	Threatened strike.	Garage workers	Asked 6-day week, shorter hours, etc.	Pending	Nov. 15		3,000	
Gunning Silk Co., Easton, Pa.	Strike	Textile weavers	Proposed wage cut on piecework.	Adjusted; no reduction in wages; returned to work.	Nov. 9	Nov. 10	120	40
United States Glass Co., Pittsburgh, Pa.	do	Clay, glass, and stone workers.	Asked wage increase	Unclassified; returned without change before arrival of commissioner.	Nov. 7	Nov. 12	100	130
Shell Oil Co., Tracy, Calif.	Controversy	Pipe-line men	Discharge of employee for smoking near tanks.	Adjusted; employee reinstated; satisfactory settlement.	Sept. 1	Nov. 2	5	40
Morris Silk Co., Easton, Pa.	Strike	Warpers	Asked $1.15 per 100 threads	Adjusted; allowed as asked	Nov. 5	Nov. 22	4	51
Quaker Oats Building, St. Joseph, Mo.	Controversy	Building workers	Union or nonunion labor	Pending	June 30		250	
State Armory Building, Fort Wayne, Ind.	Threatened strike.	Carpenters	Agreement as to union or nonunion labor.	Adjusted; will use union labor	[1]	Nov. 20	400	3,000

[1] Not reported.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, NOVEMBER, 1928—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
					1928	1928		
Mystic Water Co., Stonington, Conn.	Strike	Laborers	Foreman discharged for cause	Unclassified; all returned under new foreman.	Nov. 3	Nov. 6	79	
Michelin Tire Co., Milltown, N. J.	do	Tire workers	Proposed wage cut of 3½ to 5 per cent.	Adjusted; compromised on wage cut of about 2½ per cent.	Nov. 7	Nov. 14	800	800
Pittston Coal Co., Sugar Notch, Pa.	do	Miners	Pump runner refusing to cross shift.	Adjusted; man agrees to cross shift.	Nov. 15	Nov. 15	245	5
State Armory Building, Noblesville, Ind.	Controversy	Carpenters	Objection to nonunion carpenters.	Adjusted; agreed to use union carpenters.	Oct. 15	Nov. 7	15	8
State Armory Building, Anderson, Ind.	do	Plumbers	Objection to nonunion plumbers.	Adjusted; agreed to use all union plumbers.	do	Nov. 1	2	8
Memorial Bridge work, Quincy, Ill.	do	Engineers on derricks.	Asked $1.25 per hour; now receiving $1.	Pending	Nov. 16		12	40
Snellenberger Department Store, Philadelphia, Pa.	Strike	Elevator operators	Asked $25 per week; company desired to replace union operators with nonunion.	Unable to adjust; store now employing new operators.	(1)	Nov. 27	29	33
Granite work, Albany, N. Y.	Controversy	Contractors on granite work.	Dispute relative material used on job.	Pending	Nov. 16		(1)	
Foundation Co., Quincy, Ill.	do	Carpenters	Claimed union carpenters should be employed.	do	do		35	
Arrow Silk Co., McAdoo, Pa.	Strike	Silk workers	Wage dispute; workers claimed reduction; company claimed only change in method.	Adjusted; company returned to former method; all return.	Nov. 22	Nov. 26	50	
Ayres Building, Indianapolis, Ind.	Threatened strike.	Carpenters	Jurisdiction of metal work	Pending	Nov. 20		50	100
Construction, Plymouth, Pa.	Controversy	Building	Miners refused to work with nonunion building crafts.	Adjusted; contract sublet and union crafts employed.	Oct. 20	Nov. 23	20	
Daily News Building, Chicago, Ill.	do	Ironworkers and millwrights.	Jurisdiction of iron work	Pending	(1)		124	
Dallas Brass Co., Chicago, Ill.	do	Carpenters and ironworkers.	do	do	(1)		5	
Knickerbocker Press, Albany News, Times-Union, Albany Telegram, Albany, N. Y.	Strike	Printers	Asked wage increase and shorter hours.	Unable to adjust; nonunion workers employed.	Nov. 23	Dec. 1	197	350
Total							11,254	4,843

[1] Not reported.

Work of the Railroad Board of Mediation During 1927-28

THE United States Board of Mediation was constituted under the terms of the railroad labor act of 1926, to handle cases of dispute which the carriers and employees have been unable to settle in conference. When disputes between carriers and their employees can not be settled through mediation proceedings, the law directs that the Board of Mediation shall endeavor to induce the parties to submit their controversy to arbitration. The arbitration board shall be composed of three or of six members, as the parties may determine, one-third of whom shall represent the carriers, one-third the employees, and one-third shall be neutral. If the representatives of the carriers and employees fail to name the neutral member or members of the board, it becomes the duty of the Board of Mediation to appoint such member or members.

The board began operations in July, 1926. Its second annual report covering the fiscal year 1927–28 has recently been issued. According to this report, of the 265 cases submitted to the Board of Mediation during 1926–27, 154 cases remained unsettled on July 1, 1927. During the year ended June 30, 1928, the board received 98 requests for its services in the adjustment of differences concerning rates of pay, rules, or working conditions, involving 21 railroad labor organizations and 176 carriers.

Altogether the board settled 145 cases during the year ended June 30, 1928. Of these 145 cases 84 were settled through mediation, 14 cases were submitted to arbitration, 37 cases were withdrawn through mediation, 8 cases were withdrawn without mediation, and 2 cases were closed by board action. In five of the cases reported as having been disposed of during the previous year through arbitration, the agreements to arbitrate were subsequently canceled. Two of these cases were later settled by mediation and three by withdrawal. By the end of the year 9 out of the 14 cases submitted to arbitration had been concluded by awards under the railroad labor act. Of the 107 cases remaining unsettled, 58 had been assigned for mediation and were awaiting the arrangement of mediation conferences. The remaining 49 cases had not been accepted for mediation.

In addition to the foregoing cases relating to rates of pay, rules, or working conditions, the board received during the year applications for its services in the adjustment of 58 other cases which were, for the most part, grievances involving the interest of employees as affected by the application of rules or of discipline. During the preceding year 62 such cases were received. Of the total of 120 grievance cases 3 have been disposed of—2 by voluntary withdrawal and 1 through mediation.

The board states that the consideration of grievance matters by the board as provided in the railroad labor act contemplates the creation of adjustment boards. Such adjustment boards have not been generally created, and the board has therefore been hampered in its efforts to render services in such cases.

Metal Workers' Dispute and Compulsory Arbitration in Germany[1]

By Peter A. Speek

THE recent lockout of about a quarter of a million workers in the iron and steel industry in Germany, lasting about five weeks, is attracting world-wide attention, not merely because of the magnitude of the stoppage of work for so long a period, but also on account of the arbitration methods and principles involved in the dispute.

The principal events leading to the lockout and finally to its end were as follows:

On September 24, 1928, the labor unions in the iron and steel industry in Rhineland and Westphalia served notice to their employers for termination on October 31, 1928, of the existing collective agreements. With this notice was coupled a demand for an increase of wages of 15 pfennigs per hour for all adult workers and for certain technical changes in wage agreements. These demands the employers refused.

Conciliation proceedings were instituted at once, and as early as September 26 an award was issued granting small increases of from 3 to 4 per cent for certain groups of workers, this being equivalent to an average increase of from 1 to 1½ per cent for all workers.

The award was accepted by the labor unions but was rejected by the employers' associations. Negotiations took place on October 4 and 11, but no agreement could be reached, and the employers' associations declared a lockout of the workers, to take effect on November 1, 1928.

On the application of the workers, the Minister of Labor declared the award of September 26 binding, effective October 31, 1928; that is, on the eve of the lockout.

Nevertheless, the employers' associations locked out their workers the next day, and appealed to the labor court at Duisburg to annul the decision of the Minister of Labor chiefly as being economically unsound and legally inconsistent with the provisions of a general agreement still in force in the iron and steel industry. The employers did not and do not question the validity of the conciliation law (order of October 30, 1923) or its compulsory clauses, and the authority of the Government to intervene and declare awards binding. Their opposition is against this particular award on the above grounds which the Minister of Labor refused to recognize as being valid.

The hearing of the case in the court began at once and on November 12, 1928, the verdict of the court declared the wage award not binding; that is, it declared against the decision of the Minister of Labor. The labor unions appealed the case to the Provincial Labor Court, which, on November 24, 1928, reversed the judgment of the lower court and held that the wage increase awarded by the Minister of Labor in the iron and steel industry was legally binding. The employers immediately appealed the case to the Supreme Labor Court at Leipzig.

[1] The data on which this article is based are taken from Reichsarbeitsblatt from 1923 to date; Gewerkschafts-Zeitung, from 1924 to date; Wirtschaftsdienst, for October and November, 1928; Der Arbeitgeber for November, 1928; article by Dr. Felix Sitzler in the International Labor Review for October, 1925; and other studies and material related to arbitration of industrial disputes and published by the International Labor Office at Geneva since 1923.

However, before the Supreme Labor Court could pass upon the case, the locked-out workers and their employers came to an agreement on December 2, 1928, to resume work on the old basis of wages and hours in all plants affected by the lockout, under the condition that the dispute should be arbitrated by the Minister of the Interior, whose decision, it was agreed, should be accepted in advance as binding by both sides in the dispute.

For a better understanding of the compulsory element in the arbitration system of industrial disputes in Germany, the following brief review of the development of the system is given:

The German system of conciliation and arbitration provides for a system of local conciliation committees. In case of a dispute, the first step of the committee is to bring the parties together, through their representatives, and to assist them to conclude a collective agreement. If the parties fail to agree, the committee then makes proposals, in the form of an award, for an agreement, which the parties either accept or reject. In case of rejection, the competent authorities may declare the award binding upon the parties to the dispute if the award, in the opinion of the authorities, contains a settlement "just and reasonable" for the interests of the parties to the dispute, and if its application is "desirable for economic and social reasons." [2]

The authority which has the legal power to declare the award binding has to consider only the two points above noted—its justice and reasonableness and its desirability from an economic and social standpoint. An award can not be canceled or modified. The only thing the competent authority can do is to declare the award either binding or nonbinding upon the parties to the dispute.

By the clause, "the desirability of the award for economic and social reasons," is meant the protection of the community or national interests which might suffer from a continuation of the dispute. Although the law itself does not limit the number of awards which may be declared binding, in practice the authorities have been very cautious in declaring an award binding, and resort to it only as a last measure in the attempt to end the dispute.

This authority was first given to the demobilization commissioners and to the higher demobilization officers, but was transferred by the order of October 30, 1923, to the newly created permanent conciliators (*Schlichter*) and to the Federal Minister of Labor. For each industrial area, specified by the law and in which several conciliation committees are operating, a conciliator is appointed by the Minister of Labor for the adjustment of important industrial disputes. The Minister of Labor himself has the declarative authority in all cases where an award covers areas considerably larger than the jurisdiction of a conciliator. Awards made by the authorities set up by the industries themselves—that is, by employers and employees in agreement—may also be declared binding, according to the law.

The usual beginning of the procedure in declaring an award binding is the application from one of the parties to the dispute, a party which has accepted the award and which wants to make it binding upon the other party. But proceedings may be initiated by the authorities themselves should the public interest, in their opinion, require it.

[2] Conciliation order of Oct. 30, 1923 (Reichsgesetzblatt, 1923, I, p. 1043).

Awards rejected by both parties to the dispute are quite often declared binding. For instance, in 1924, the Federal Minister of Labor declared 10 awards binding without application from any of the parties to the dispute.

Before an authority renders his decision the parties to the dispute are given an opportunity to express orally their attitude toward the award; in exceptional cases they may make their statement in writing. In case of oral statements an attempt is made to induce the parties to reach an agreement, and such an attempt is sometimes successful.

According to the law, an award may not be referred back to the conciliation authorities for reconsideration, though if demanded by public interest, new negotiations may be instituted if there is any hope that an agreement can be reached. An award may be modified only when the parties concerned agree on some modification, for instance, as to the date when the award should come into force.

Part of an award may be declared binding and part nonbinding when there is no essential connection between the parts so treated.

An award once declared binding is final, subject only to a limited appeal to the courts as described later.

Such an agreement (binding award) appears as a legal collective contract establishing juridical rights in regard to working conditions—for instance, wages and hours of labor—and these rights are to be upheld by the courts in the litigation proceedings.

A binding award, imposing mutual obligations upon the employers' associations and labor unions, affords to the individual members of these organizations a legal basis for taking steps, in the courts if need be, for the carrying out of the obligations, instead of resorting to strikes and lockouts, which in such cases are prohibited by the law. However, strikes and lockouts are not otherwise prohibited in Germany.

The law under which a binding award is made does not provide for enforcement either by penalties or other coercive measures. The persons concerned must see that their rights are carried out, by bringing their cases into court.

The legitimacy of such binding awards based upon the conciliation order of October 30, 1923, has been recognized by the Federal Supreme Court. As a result, the awards are usually obeyed, though there have been cases when the parties, either one or the other, or both, refused to carry out the terms of a binding award.

Cases brought before the common courts by a person or party concerned usually lasted so long before a final decision could be reached, owing to the usual civil court's delay, that the decision itself was already out of date.

The binding awards are ordinarily applied to large-scale industries and particularly to public utility concerns, in which the community interests are directly and seriously involved. They are also applied to undertakings where unskilled and unorganized workers are very largely employed, for the reason that these are not always able to secure satisfactory working conditions.

The binding awards are not concerned merely with wages and hours of labor. They may relate to the entire field of working conditions in a plant or in an entire industry. Working hours have figured prominently in the binding awards, especially since the order

of December 31, 1923,[3] providing for an increase of working hours under certain conditions.

In 1924 the Federal Minister of Labor declared 153 awards binding, 74 on the application of the employers, 69 on that of the workers, and 10 on the basis of his own judgment. In 77 cases the dispute was settled by agreement between the employees and employers.

The number of awards declared binding by the conciliators (*Schlichter*) in different conciliation areas varies. In 1924 there were in Greater Berlin 31 (130 disputes were settled by voluntary agreement); in Westphalia 57; in Rhineland 28 (78 by voluntary agreement); in Saxony 146 (101 by voluntary agreement); in Wurtemberg 6; in Hesse 30; in Upper Silesia 4; in Pomerania 22; and in East Prussia 35.

The German labor unions do not seem to be unanimous in their attitude toward compulsory conciliation; that is, toward binding awards.

The free trade-unions of the Allgemeiner Deutcher Gewerkschaftsbund are apparently rather opposed to the compulsory system. The central committee adopted a resolution[4] which termed the compulsory system "a danger for the vital interests of the workers and of the trade-union movement," emphasizing the fact that the labor unions "can not renounce the right to use the strike, if need be, as the last weapon in the fight for justifiable demands made by the workers." However, the resolution ends with the statement that the labor unions are not opposed to "the legal regulation of the procedure for adjusting disputes, even including the possibility of declaring awards binding under certain circumstances."

The employers' associations, as a rule, seem to be rather opposed to the compulsory conciliation. The Federation of German Employers' Associations has even conducted a propaganda campaign against the system, nicknaming it a "Zwangstarife," meaning compulsory wage rates and labor conditions.

In order to do away with the delays so often occurring in the ordinary civil courts, a system of labor courts was established by the act of December 23, 1926, which came into force on July 1, 1927. This law created three types of courts: (1) The local labor court (*Arbeitsgericht*) as a court of first instance; (2) provincial labor court (*Landesarbeitsgericht*), a court to which can be taken cases exceeding 300 marks from the lower labor court for reconsideration; and (3) the State or Federal labor court (*Reichsarbeitsgericht*), which forms a special division of the German Supreme Court.

The new special labor courts, of which about 800 are contemplated according to a statement of the Ministry of Labor, have jurisdiction, to the exclusion of the ordinary civil courts and irrespective of the size of the dispute, in all civil disputes between the parties to collective agreements or as to the existence or nonexistence of a collective agreement, and in civil disputes between parties capable of entering into collective agreements; in disputes between employers and employees arising out of employment or apprenticeship, as to the existence or nonexistence of a contract of employment or apprenticeship, or

[3] Reichsgesetzblatt, 1923, I, p. 1249. [4] Gewerkschafts-Zeitung, 1924, No. 13 (Mar. 29).

arising out of unlawful actions so far as the same are connected with employment or apprenticeship.

These labor courts consist of qualified judges and assessors chosen from employers and employees, the assessors of the three types of courts bearing the titles labor judge, State labor judge, and Federal labor judge.

In order to conduct labor proceedings with the greatest simplicity and expedition, lawyers or persons conducting legal proceedings as their profession are excluded from the lower labor courts. Members of employers' and employees' associations as duly accredited spokesmen are admitted, however.

In the provincial and Federal labor courts it is intended that the parties be represented by lawyers, but members of employers' and employees' associations may appear as counsel.

The purpose of the system of special labor courts is to administer the labor laws, including the compulsory administration clauses, and the Federal labor court guarantees the uniformity of administration of labor laws throughout the nation.

Strike of Waterside Workers in Australia

THE strike of waterside workers throughout Australia, which began early in August, ended October 24, 1928. The strike was against an award made by the arbitration court, which set up a system of hiring dock workers twice a day after September 10, 1928, while the men advocated a daily hiring system. During the strike most of the interstate vessels were held up, causing the cessation of iron and steel works, sugar mills, and wool sales, and throwing out of employment thousands of workers indirectly affected.

In order to enable shipowners to engage free labor on the wharves and to protect them in carrying on their business, a bill was passed September 22, 1928, empowering the governor general to make regulations having the force of law with respect to the employment of transport workers and the licensing of persons to act as such and to regulate the employment of unlicensed persons as transport workers, thus making it possible for labor so employed during a strike to be continued after the strike had ended.

The passing of the act and the unyielding attitude of the shipowners' association in refusing to come into conference with the striking unions until after resumption of work on the docks were the probable causes of the union workers' yielding. On October 20 the men applied for registration and licenses and on receiving them immediately applied for work at the established places only to find that on application of the shipowners the clause in the award granting preference of employment to members of the federation had been stricken out, thus causing the union men to lose their former right of prior employment.

The owners issued instructions to foreman stevedores and wharf foremen to prefer volunteers when engaging labor, with the result that in many ports the union stevedores were reported as out of employment.

POPULATION PROBLEMS

Movement of Population in Western and Northern Europe

A RECENT study of the population movement in western and northern Europe by Dr. Robert R. Kuczynski concludes that, with fertility and mortality conditions as they are at present, the population of the larger countries—England and Germany as well as France—is doomed to die out.[1]

This study was made under the auspices of the Institute of Economics of the Brookings Institution, and, it is announced, will be followed by other studies relating to southern Europe, the United States, and other regions.

The significance of the present study as well as of the method to be employed generally by Doctor Kuczynski in this series of investigations is indicated in the introduction to his book:

> Let us, for a moment, consider England, which in 1927 had 655,000 births and 485,000 deaths. It may seem at first sight that an excess of 170,000 births is a proof of considerable vitality and it may even be assumed that by further improvements in public health the number of deaths might still be reduced. Yet, incredible as it may sound, those 655,000 births of 1927 mean that on the average each woman during her lifetime gives birth to but two children, and that if the population is to hold its own not one of the children thus born may die before attaining parenthood. In case then that natality does not again increase, the population of England is bound to die out no matter how low mortality may be reduced. And this state of affairs is by no means confined to England. Conditions are about the same in Germany and only slightly better in France.

This quotation emphasizes sufficiently the seriousness of the problem. The result of the analysis to which it is subjected in this volume is briefly summarized by the author in the following language:

> Around 1850, three and one-half million children a year were born in western and northern Europe. Fifty years later the annual number of births was four and three-fourths millions. At present it is again about three and one-half millions. In the meantime, the population has considerably increased: From 113,000,000 in the middle of the nineteenth century to 189,000,000 in 1927. The birth rate—that is, the number of births per 1,000 inhabitants—therefore has considerably decreased: From 1841 to 1885 it averaged about 32; by 1913 it had fallen to 24; in 1927 it was 18 only. The decrease of the birth rate began in France, but involved sooner or later every country, so that there is no longer any marked difference between the birth rates of the various parts of western and northern Europe.
>
> Forty or fifty years ago the average number of children born to each woman (married and unmarried) was 4 or 5 in all countries of western and northern Europe, with the exception of France and Ireland, where it was about 3. In 1926 it was practically everywhere below 3 and averaged about 2.3. Part of the children, of course, die before reaching marrying age. Forty or fifty years ago the number of children born to each woman and becoming parents in their turn averaged about 3 in all countries of western and northern Europe with the exception of France and Ireland, where it was about 2. In 1926 the number of such children was still above 2 in some of the smaller countries, like Holland, Denmark, and Finland, but it was below 2 in all the larger countries—in France and especially in England and Germany.

[1] Kuczynski, Robert R.: The Balance of Births and Deaths. New York, The Macmillan Co., 1928.

If each woman has two children who become parents in their turn, the population will hold its own. If she has three such children, the population will increase by one-half within one generation. If she has less than two such children, the population will sooner or later decrease. With a fertility and a mortality as they prevailed 40 or 50 years ago, the population then would have increased by about one-half per generation in all countries of western and northern Europe with the exception of France and Ireland, where the population about held its own. With a fertility and a mortality as they prevail at present, the population of some smaller countries still shows a genuine growth, but the population of the larger countries, France, and especially England and Germany, is doomed to die out.

Birth Rates

TAKING up in detail the major elements of the problem, the author examines first the fundamental question of the birth rate. He begins by indicating that he is not particularly impressed by the argument usually made to explain the increase in the British birth rate in the two middle decades of the nineteenth century—namely, that improvements in methods of birth registration will explain it. He points out that the birth rate fluctuated materially in the century preceding those decades and that consequently other factors are far more important in giving us the increased rate than any bettering of the method of recording births.

What is important, however, is the fact that in the last quarter of the nineteenth century the rate began to decline steadily throughout western and northern Europe.

If we again combine the countries of western and northern Europe (taking them this time not with their present but with their pre-war territory), we find that the birth rate which had fluctuated between 31.3 and 34.2 from 1872 to 1886 dropped below 31 in 1887 and never reached 31 again. It fell definitely below 30 in 1897, below 29 in 1903, below 28 in 1905, below 27 in 1909, below 26 in 1910, and below 25 in 1911. The second half of the eighties has then to be considered as the turning point in the trend of the birth rate. The decrease was slow up to the beginning of the twentieth century and the absolute numbers of births still increased until 1901. The decrease of the birth rate became ever more rapid from 1909 on and the absolute number of births in 1914 was smaller than in any of the 40 preceding years.

It goes without saying that the birth rate fell during the war, and what is of particular interest is the fact that it continued to fall rapidly thereafter.

Immediately after the war the contraction of many marriages which had been postponed caused the birth rate to rise temporarily. It reached 23.8 in 1920–21, but it fell again to 21 in 1922–23, 19.9 in 1924–25, and 19.2 in 1926. (In 1927 it was 18.2.) Although the population of western and northern Europe had increased from 109.2 millions in 1841–45 to 188.3 millions in 1926, or by 72 per cent, the number of births in 1926 (3,613,000) was practically the same as the average in 1841–45 (3,481,000). (In 1927 it was less than 3,500,000.)

Another matter of interest in this connection is the fact that the lowering in the birth rate started at different times in different countries, France having been the first and longer conspicuous nation in this regard, whereas Germany was noted until the first decade of this century as the country of a relatively large birth rate.

The author concludes his survey of the subject of birth rates by explaining how little stress is to be laid upon the birth rates of small countries.

The usual comparison of small with large countries is indeed rather misleading. Holland still has a considerably higher birth rate than any other country of western and northern Europe. In 1925, for example, it was 24.2 as compared

with 20.7 in Germany. But while Holland, with a population of 7,366,000, had 178,545 births, the four eastern Provinces of Germany, with an aggregate population of 7,100,000, had 178,009 births, or about as many as Holland, and the birth rate for this territory was 25.1 as compared with 24.2 for Holland. On the other hand, the birth rate in 1925 was in Switzerland 18.4, in Sweden 17.5, and in the Free State of Saxony 17.7, the populations being 4, 6, and 5 millions, respectively. If the large countries then were subdivided so as to admit adequate comparison with the small countries, the position of the smaller countries would no longer appear extreme.

Measurement of Fertility

TURNING to the study of the fertility rates, Doctor Kuczynski reviews with care not only the methods heretofore employed in the measuring of fertility by relating the number of births to the number of women of child-bearing age in order to determine the general fertility rate (i. e., the number of women between the ages of 15 and 50 years) but he also surveys all the data to be gathered in reference to the countries included within the scope of this volume, including the nearly two centuries of figures for Sweden and Finland and the century or more of records for some of the other Western and Northern European countries. In order that the really significant features of Doctor Kuczynski's treatment of this question may be grasped, it seems desirable to quote rather extensively from his text.

Since 1915, the general fertility rate has decreased much more than the birth rate. The percentage of women of child-bearing age has increased indeed in all countries of western and northern Europe, and this mainly because, on account of the fall of the birth rate, the percentage of children has decreased. Combining all the countries of western and northern Europe (with their present territory), the percentage of women of child-bearing age in 1920 was 27.84. It probably has increased somewhat in the subsequent years, since the percentage of children has continued to decrease materially. Assuming that in 1926 the percentage of women of child-bearing age was 28, the birth rate of 19.19 per 1,000 in western and northern Europe would correspond to a fertility rate of $\frac{1,919}{28}=68.5$ per 1,000. Assuming, on the other hand, that in 1911–1914 the percentage of women of child-bearing age was 26, the birth rate of 24.16 would correspond to a fertility rate of $\frac{2,416}{26}=92.9$. While the birth rate from 1911–1914 to 1926 has decreased by 21 per cent, the fertility rate has decreased by 26 per cent.

If among the women of child-bearing age the percentage of women between 25 and 35 years is large, the general fertility rate is likely to be high even if the specific fertility in each age group may be low, while if the percentage of women between 25 and 35 is small, the general fertility rate is likely to be low even if the specific fertility in each group may be high. The fact that Norway in 1890–91 had almost the same general fertility rate as 15 years earlier although the fertility in almost each age group decreased considerably is thus to be explained by the increased percentage of women between 25 and 35. It, therefore, becomes necessary to compute specific fertility rates by age of mothers.

Fertility rates for the individual years of age would then seem to afford a perfect measure of fertility as a whole. But the result appears cumbrous since it involves the consideration of about 40 different fertility rates. The problem, however, how to fuse those different annual rates into one numerical expression is easy to solve. All that is necessary is to add the different specific fertility rates. The sum thus obtained—which we may call the total fertility—indicates, indeed, exactly how many children would be born to 1,000 women arriving at the age of child-bearing, with fertility as it is and if none of those 1,000 women died before having passed through child-bearing age.

As the author remarks, pointing out that he first called attention to the specific fertility rates of certain countries more than twenty years ago, the significance of that analysis was quite lost at a time when the

excess of births over deaths aroused altogether other apprehensions than those of the low mortality of other countries.

Doctor Kuczynski goes on to explain what is called the gross reproduction rate:

Since our purpose is here to exclude the influence of mortality, we may put it still more simply by saying that according to the fertility of 1891–1900 in Sweden, 4,134 is the number of children born to each 1,000 women.

The majority of these 4,134 children are boys. Since we are concerned here with births, we may restrict ourselves to the female sex. We should, moreover, since the live births offer a better basis of comparison, exclude stillbirths. The total number of births in 1891–1900 was 1,374,118, of which 1,338,726 were live births and 650,732 female live births. The total fertility has therefore to be reduced in the proportion of 650,732: 1,374,118. The new total thus obtained is $\frac{4,134 \times 650,732}{1,374,118} = 1,957.8$ and this, according to the fertility of 1891–1900 in Sweden, is the number of girls born to each 1,000 women. $\frac{1,957.8}{1,000}$ or 1.958 would then be what we may call the *gross reproduction rate* of Sweden in 1891–1900.

This method is very carefully tested with respect to quinquennial fertility rates for Sweden and he summarizes his conclusion in the following language:

The deviation of the trend of the general fertility rates from the trend of the quinquennial fertility rate will perhaps still better be illustrated on the basis of an hypothetical case. Assuming that the number of women and of births is as indicated in the table below, the total of the quinquennial fertility rates multiplied by 5 would be 5,500, and the general fertility rate multiplied by 35 would likewise be 5,500.

FERTILITY RATES OF WOMEN OF SPECIFIED AGE CLASSES

	15 to 20 years	20 to 25 years	25 to 30 years	30 to 35 years	35 to 40 years	40 to 45 years	45 to 50 years	Total
Women	100,000	90,000	80,000	70,000	60,000	50,000	40,000	490,000
Births	2,000	13,500	20,000	21,000	13,200	6,000	2,000	77,700
Fertility rate	20	150	250	300	220	120	50	1,110

Let us now assume that there were 10,000 more women of 15 to 20 years and 10,000 less women of 45 to 50 years, while the number of births remained the same for each age group. The general fertility rate, of course, would remain the same, but the fertility rate in the age group from 15 to 20 years would drop from 20 to 18.18, while the fertility rate of the age group from 45 to 50 years would rise from 50 to 66.67, and the total of the quinquennial fertility rates multiplied by 5 would increase from 5,500 to 5,574. Let us assume on the other hand that the number of women in each age group remained the same, but that there were 1,000 more births in the youngest age group and 1,000 less births in the oldest age group. The general fertility rate would then still remain the same, but the fertility rate in the youngest age group would increase from 20 to 30, the fertility rate in the oldest age group would drop from 50 to 25, and the total of the quinquennial fertility rates would be 5,395 instead of 5,500. The trend of the general fertility rates indeed follows so little the trend of the quinquennial fertility rates that it is not justifiable to compute a gross reproduction rate from a general fertility rate.

After discussing the data particularly with reference to postwar years bearing on the subject of the gross reproduction rate, Doctor Kuczynski arrives at certain conclusions for western and northern Europe as a whole.

GROSS REPRODUCTION RATE AND GENERAL FERTILITY RATE

Country	Years	Gross reproduction rate	General fertility rate	Ratio of gross reproduction rate to general fertility rate
Finland	1921–1925	1.533	89.6	17.1
Norway	1916–1920	1.661	97.3	17.1
Denmark	1926	1.270	78.6	16.12
Sweden	1921–1922	1.346	81.1	16.6
France	1922–1925	1.159	69.5	16.7
Germany	1925	1.132	71.4	15.8
England	1921	1.312	79.2	16.6

In the eighties of the last century, the gross reproduction rate in Germany and in northern Europe varied between 2 and 2.5. The total number of children (boys and girls) born to each woman then averaged four or five. Conditions were more or less the same in the other countries of western Europe, with the exception of France and Ireland where the number of children to each woman probably was about three. In 1926 the gross reproduction rate in the large countries of western Europe as well as in all countries of northern Europe varied between 1.05 and 1.43. The total number of children (boys and girls) born to each woman then varied between 2.15 and 2.95. Conditions were more or less the same in the smaller countries of western Europe with the exception perhaps of Holland, where the number of children to each woman possibly still exceeded three.

According to the fertility in western and northern Europe in 1926, the number of girls born to each woman is 1.12, and the number of children (boys and girls) born to each woman 2.3.

Net Reproduction Rates

IN HIS third chapter the author of the study takes up net reproduction rates, which brings into it an analysis of the mortality statistics upon the problem in hand. He points out that, "if in a given population no death occurred and no birth, this population would ever grow older, and after 50 years there would be no more women of child-bearing age and no more men with full physical working capacity. The total population would still be as large as 50 years earlier, but in those 50 years it would not have done anything toward its reproduction and it would have lost any future chance of reproduction." In other words a comparison of yearly births and the yearly deaths does not warrant conclusions with respect to the trend in population. As he says:

> The pertinent question is not Is there an excess of births over deaths? but rather, Are natality and mortality such that a generation which would be permanently subject to them would during its lifetime—that is, until it has died out—produce sufficient children to replace that generation? If, for instance, 1,000 newly born produce in the course of their lives exactly 1,000 children, the population after the death of the older 1,000 will remain unaltered. If natality and mortality continue to be what they were, the 1,000 children will in the course of their lives again produce 1,000 children, and if natality and mortality remain permanently the same, the population will always exactly hold its own. If more than 1,000 children are produced by a generation of 1,000 newly born, the population will increase; if less than 1,000 are produced, the population will decrease and finally die out.

Doctor Kuczynski goes on to make it clear that he is concerned only with the female population in the consideration of this problem. All his conclusions in this regard therefore deal with the mortality and fertility of women within the child-bearing age. He first undertakes to ascertain on the basis of present mortality how many of each

1,000 newly born girls reach and survive the ages 15 and 50 years; he next undertakes to ascertain the actual numbers of females living in each year of child-bearing age and the number of female births by age of their mothers in order to compute fertility rates for each year of age and, finally, he endeavors to apply these rates to the number of women who in a given stationary population would according to life tables be 15 to 16, 16 to 17 years, etc. This analysis is applied to Sweden largely because the best data are available for that country and he concludes that for the decade ending in 1900 the actual number of births in that country was 43.5 per cent more than necessary to maintain the population unchanged and a net reproduction rate of 1.435 existed for Sweden. In his own words the conclusion is:

> According to the fertility prevailing in Sweden in 1891–1900, 1,958 girls were born to each 1,000 women; according to the mortality prevailing in the same period, this number would be reduced to 1,435. If fertility and mortality had remained the same, the 1,435 surviving girls would give birth to $1{,}435 \times 1.958$ girls of whom $\frac{4}{10}\frac{3}{00}\frac{5}{00}$ would survive, so that the net yield of the 1,435 girls would be $1{,}435 \times 1{,}435 = 2{,}060$, etc. Population would double in about two generations.

Since the net reproduction rate has in the nature of the case to be smaller than the gross reproduction rate, the author traces some of the results for western European countries. The net reproduction rate of Finland, which was 1.433 in the decade ending 1910, appears to have ranged around 1.09 for 1926; that of Denmark fell from about 1.524 in the years 1901–1905 to about 1.03 in 1927; that of Sweden by 1926 was presumably about 0.95; that of France fell in a quarter century from 0.979 to about 0.937; Germany's rate, once 1.448 (1881–1890), by 1927 ranged around 0.83; while that of England and Wales fell from around 1.312 in 1921 to below 0.82 in 1927.

> In all western and northern Europe, the gross reproduction rate in 1926 has been about 1.12. Since the net reproduction rate in all probability did not exceed five-sixths of the gross reproduction rate, the net production rate in all probability did not exceed 0.93.
>
> In the eighties of the last century, the net reproduction rate in Germany, Denmark, Sweden, and Finland was 1.4 or 1.5. The total number of children (boys and girls) born to each woman and becoming parents in their turn, then, average three. This means a doubling of the population within two generations. Conditions were more or less the same in the other countries of western and northern Europe with the exception of France and Ireland, where the number of children to each woman probably was about two; the population there only held its own. In 1926 the net reproduction rate was 1.1 in Denmark and Finland, but less than 1 in France and Sweden, and especially in England and Germany. The total number of future parents (boys and girls) born to each woman in 1926 was still higher than two in some of the smaller countries, but it was lower than two in all the larger countries. The average number was about 1.9. This means that the population does not hold its own.
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> According to the fertility and mortality in western and northern Europe in 1926, 100 mothers give birth to 93 future mothers only. With the fertility of 1926 the population is bound to die out unless mortality of potential mothers decreases beyond reasonable expectations. And fertility continued its downward path in 1927.

In his last paragraph Doctor Kuczynski discusses the present and the future balance of births and deaths, calling attention to the fact that, "in the present population of western and northern Europe the proportion of women of child-bearing age is particularly large and the proportion of young children and old persons particularly small." As he says, "the age composition of the population of western and northern Europe tends to lower the number of deaths."

The present death rate of 13 per 1,000 is therefore, taken by itself, misleading. That it can not permanently last can, moreover, be easily realized by a simple logical consideration. A death rate of 13 per 1,000 means that $\frac{13}{1000}$ or $\frac{1}{77}$ of the population die within a year, and if such a rate were permanent, it would mean that the average length of life is 77 years. But the length of life, of course, is actually much lower in every country of western and northern Europe. Even in Denmark, with its exceptionally low mortality, the mean length of life in 1921–1925 was 61 years. Denmark in that period had 11.3 deaths per 1,000 inhabitants, but the death rate derived from the actual mortality in the individual years of age was $\frac{1}{61}$ or 16.4 per 1,000. By a similar process we find as corrected death rates for England, 1920–1922: 17.3 (crude death rate 12.4); Scotland, 1921: 18.3 (13.6); Germany, 1921–1923: 18.7 (140). The difference between the crude death rate, that is the number of deaths per 1,000 inhabitants, and the corrected death rate, that is the rate derived from the mortality in the individual years of age, is not as large in all countries of western and northern Europe.

People are misled by the fact that the number of births appears large because of the age composition of western and northern Europe, for at present the proportion of children and of old persons is comparatively small and the number of births is comparatively large.

But the women who now are in child-bearing age will by and by pass this stage and will have to be fully replaced if with present fertility the number of births is not to decrease. The chances of such a replacement in the near future are easy to ascertain. In 1926 there were in western and northern Europe 23.67 million females under 15 years and 25.85 million females from 15 to 30 years. It is evident that even if all girls who now are under 15 years reached child-bearing age, they would by no means be able to replace those who now are between 15 and 30 years. This result, of course, is partly due to the reduction of births during the war. But even if there had lived in 1926 as many girls of 5 to 10 and of 10 to 15 years as of under 5 years, the girls under 15 years (who would then number 25.06 millions) would not suffice fully to replace those of 15 to 30 years.

He endeavors to summarize for the area under consideration with certain figures taken for the year 1926.

The total number of female births in 1926 was 1¾ millions. The total number of women from 15 to 50 years was 52¾ millions. If the number of female births continued to be 1¾ millions and if no death occurred, there would be in 50 years from now $1\frac{3}{4} \times 35 = 61\frac{1}{4}$ million women between 15 and 50 years or considerably more than at present. But according to the mortality of 1926, the average number of years which the newly born girls may expect to live in the age of child-bearing is 29. If, then, the number of female births continues to be 1¾ millions, and if mortality remains what it was in 1926, the number of women between 15 and 50 years, 50 years from now, would be $1\frac{3}{4} \times 29 = 50\frac{3}{4}$ millions only as compared with 52¾ millions in 1926. But with present fertility the number of births is bound to decrease before that, since the number of women now between 15 and 30 years can not be replaced by those now under 15 years of age.

With a fertility and mortality as they prevailed in western and northern Europe 40 or 50 years ago, the population would have doubled in three generations. With a fertility and a mortality as they have prevailed for some years, the population of western and northern Europe is bound to die out. This process, of course will be rather slow. With the present age composition it would take decades until there actually would be an excess of deaths over births, and it would take centuries until the population would be half of what it is now. The process will be accelerated if emigration continues, while it will not, of course, be affected by immigration since we are concerned only with the present population and its descendants.[2] It can be stopped by an essential change in mortality or in fertility. But the future reduction of mortality in those ages which are the only decisive ones, that is, those under 50 years, can not be very great after all that has already been accomplished. The future then depends mainly on the trend of fertility.

[2] It may, however, be noted incidentally that a yearly addition of 100,000 women in child-bearing age, by immigration or by birth to future immigrants, would suffice to reestablish the equilibrium between births and deaths.

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in the Men's Clothing Industry, 1928

THIS article presents 1928 summaries of wages and hours of labor of employees in the men's clothing industry in 11 large cities and two groups of small cities—one in eastern Pennsylvania outside of Philadelphia and the other in northeastern New Jersey outside of Newark. The cities are those in which the number of employees is of sufficient importance to warrant inclusion in the report.

The 1928 study covered 200 establishments operating 369 cutting, coat, pants, and vest shops and employing 35,873 workers (17,626 males and 18,247 females); while the 1926 study covered 198 establishments operating 359 shops and employing 33,659 persons (17,048 males and 16,611 females). Earnings per hour, all employees combined, averaged 73.1 cents in 1928 as compared with 75 cents two years before. Males earned an average of 92.4 cents per hour in 1928 and 93.7 cents in 1926, and females earned an average of 53.4 cents per hour in 1928 and 54.8 cents per hour in 1926.

Average full-time hours per week of all employees covered in the industry were 44 in 1928 and 44.3 in 1926; those of males were 44.1 in 1928 and 44.3 in 1926, and those of females were 43.9 hours per week in 1928 and 44.3 in 1926.

The full-time earnings per week of all employees averaged $32.16 in 1928 and $33.23 in 1926; those of males averaged $40.75 in 1928 and $41.51 in 1926, and those of females $23.44 in 1928 and $24.28 in 1926.

The data used in compiling the 1928 figures are for a representative weekly pay period in June, July, August, or September, and, therefore, are representative of the industry in those months. The data were taken directly from the pay rolls and other records of the establishments by agents of the Bureau of Labor Statistics. According to the 1925 Census of Manufactures, the wage earners in the industry in the cities included in the report represent 62 per cent of the total number in the industry in the United States in that year, and the 35,873 for which 1928 figures are shown in the article represent 33 per cent of the number in the cities and 20.5 per cent of the number in the industry in the United States.

In Table 1 average full-time hours per week, average earnings per hour, and average full-time earnings per week are shown for employees in the "selected occupations" in the industry for each of the years, 1911 to 1914, and for employees in "all occupations" in the industry for certain specified years, 1914 to 1928, inclusive. The averages for the employees in the selected occupations from 1911 to 1914 are directly comparable, one year with another, as are the averages for the employees in all occupations from 1914 to 1928. Comparison of the averages for employees in the selected occupations with those for employees in all occupations should not be made inasmuch as the

two sets of averages for 1914 differ. One set covers 20,118 employees in selected occupations in 153 establishments and the other 24,597 employees in all occupations in the same establishments.

Index numbers of the averages (using the 1913 average as the base or 100 per cent) are also given in the table in order to have continuous and comparable data, one year with another over the entire period from 1911 to 1928. The indexes for each of the years 1911 to 1914 are simple percentages. Those for 1919 and for each of the succeeding years were computed by increasing or decreasing the 1914 index for selected occupations in proportion to the increase or decrease in the averages for all occupations as between 1914 and the specified succeeding year.

Average full-time hours per week increased from an index of 104.6 in 1911 to 105.2 in 1912, then decreased to 85.3 in 1922, increased to 85.7 in 1926, and decreased to 85.1 in 1928. The decrease between 1913 and 1928 was 14.9 per cent.

Average earnings per hour increased from an index of 86.7 in 1911 to 100 in 1913, decreased to 99.6 in 1914, increased to 295.7 in 1924 then decreased to 291.8 in 1926 and to 284.4 in 1928. The increase between 1913 and 1924 was 195.7 per cent and the decrease between 1924 and 1928 was 3.8 per cent.

Average full-time earnings per week increased from 90.2 in 1911 to 100 in 1913, decreased to 98.8 in 1914, increased to 253.6 in 1924, and decreased to 243.2 in 1928. The increase between 1913 and 1924 was 153.6 per cent and the decrease between 1924 and 1928 was 4.1 per cent. Average full-time earnings per week did not increase or decrease in the same proportion as average earnings per hour because of the change from year to year in average full-time hours per week.

TABLE 1.—AVERAGE HOURS AND EARNINGS WITH INDEX NUMBERS, 1911 TO 1928

Item	Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100) of—		
							Full-time hours per week	Earnings per hour	Full-time earnings per week
Selected occupations	1911	80	13,751	54.4	$0.229	$12.30	104.6	86.7	90.2
	1912	117	18,168	54.7	.231	12.49	105.2	87.5	91.6
	1913	133	19,874	52.0	.264	13.63	100.0	100.0	100.0
	[1] 1914	153	20,118	51.6	.263	13.47	99.2	99.6	98.8
All occupations	[1] 1914	153	24,597	51.3	.256	13.06			
	1919	134	19,919	47.9	.446	21.08	92.6	173.5	159.5
	1922	112	25,013	44.1	.728	31.91	85.3	283.2	241.4
	1924	152	27,681	44.1	.760	33.52	85.3	295.7	253.6
	1926	198	33,659	44.3	.750	33.23	85.7	291.8	251.4
	1928	200	35,873	44.0	.731	32.16	85.1	284.4	243.2

[1] Two sets of averages are shown for 1914 for the industry—one for selected occupations and the other for all occupations in the industry. The averages from 1911 to 1914 for selected occupations only are comparable one year with another, as are those for all occupations one year with another from 1914 to 1928.

Table 2 shows, for 1926 and 1928, average full-time hours per week, earnings per hour, and full-time earnings per week for all males and for all females in each of the selected occupations in the industry and for both sexes combined in all occupations.

In 1926 average full-time hours per week of males in the various occupations ranged from 44.1 for coat and vest operators to 44.6 for pants pressers, and those of females from 43.8 for coat basters to 45.2 for shapers. The 1928 averages for males ranged from 43.7 for vest operators to 44.3 for pants pressers, and of females from 43.3 for coat operators to 44.8 for pants basters.

Average earnings per hour in 1926 of males in the various occupations ranged from 85.1 cents for examiners to $1.123 for cloth cutters, and of females ranged from 41 cents for fitters and trimmers to 63.8 cents for coat operators. In 1928 these averages of males ranged from 82.1 cents for examiners to $1.129 for cloth cutters, and of females from 38.3 cents for examiners to 63.2 cents for coat operators.

Average full-time earnings per week of males, in the various occupations in 1926, ranged from $37.70 for examiners to $49.64 for cloth cutters, and of females from $18.25 for fitters and trimmers to $28.33 for coat operators. In 1928 these averages for males ranged from $36.12 for examiners to $49.45 for cloth cutters, and of females from $16.97 for examiners to $27.37 for coat operators.

TABLE 2.—AVERAGE HOURS AND EARNINGS, 1926 AND 1928, BY OCCUPATIONS

Occupation	Sex	Number of establishments		Number of wage earners		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
		1926	1928	1926	1928	1926	1928	1926	1928	1926	1928
Basters, coat	Male	78	86	1,710	1,670	44.3	44.2	$0.925	$0.905	$40.98	$40.00
	Female	74	82	1,436	1,255	43.8	44.0	.580	.557	25.40	24.51
Basters, pants	do	31	15	103	66	44.3	44.8	.469	.548	20.78	24.55
Basters, vest	do	61	54	304	309	44.5	44.0	.612	.570	27.23	25.08
Total basters	do	125	119	1,843	1,630	44.0	44.0	.578	.559	25.43	24.60
Bushelers and tailors	Male	104	103	553	508	44.3	44.1	.856	.828	37.92	36.51
Cutters, cloth, hand and machine	do	82	81	1,880	2,048	44.2	43.8	1.123	1.129	49.64	49.45
Examiners, shop and stock room	do	103	91	681	417	44.3	44.0	.851	.821	37.70	36.12
	Female	35	47	205	208	44.4	44.3	.497	.383	22.07	16.97
Fitters and trimmers, coat	Male	80	78	228	233	44.4	44.2	1.069	1.037	47.46	45.84
	Female	13	19	38	83	44.5	43.9	.410	.461	18.25	20.24
Hand sewers, coat	Male	24	54	211	371	44.3	44.1	.888	.953	39.34	42.03
	Female	100	104	3,973	4,103	44.4	43.9	.545	.527	24.20	23.14
Hand sewers, pants	do	82	72	858	830	44.2	44.1	.451	.454	19.93	20.02
Hand sewers, vest	do	68	75	842	943	44.1	43.9	.578	.533	25.49	23.40
Total hand sewers	do	185	169	5,673	5,876	44.3	44.0	.536	.518	23.74	22.79
Operators, coat	Male	92	101	2,363	2,562	44.1	44.2	1.034	1.016	45.60	44.91
	Female	77	80	2,599	3,301	44.4	43.3	.638	.632	28.33	27.37
Operators, pants	Male	75	78	1,533	1,507	44.3	44.2	.961	.919	42.57	40.62
	Female	80	77	2,317	2,581	44.7	44.3	.576	.573	25.75	25.38
Operators, vest	Male	55	62	511	536	44.1	43.7	1.062	1.024	46.83	44.75
	Female	58	65	940	1,205	44.5	43.8	.630	.571	28.04	25.01
Total operators	Male	175	174	4,407	4,605	44.2	44.1	1.012	.986	44.73	43.48
	Female	149	144	5,856	7,087	44.6	43.7	.612	.600	27.30	26.22
Pressers, coat	Male	100	108	3,296	3,636	44.3	44.0	.933	.912	41.33	40.13
	Female	6	7	174	177	44.8	44.2	.470	.475	21.06	21.00
Pressers, pants	Male	92	88	872	847	44.6	44.3	.904	.870	40.32	38.54
	Female	4	6	69	77	44.0	44.0	.529	.539	23.28	23.72
Pressers, vest	Male	72	78	453	486	44.4	44.2	.941	.893	41.78	39.47
	Female	13	13	61	76	44.5	44.4	.532	.517	23.67	22.95
Total pressers	Male	193	190	4,621	4,969	44.4	44.1	.928	.904	41.20	39.87
	Female	18	17	304	330	44.6	44.2	.495	.498	22.08	22.01
Shapers, coat	Male	92	85	258	243	44.2	43.9	1.041	1.060	46.01	46.53
	Female	6	7	20	33	45.2	44.2	.473	.453	21.36	20.02
Other employees	Male	158	146	2,499	2,562	44.4	44.3	.716	.713	31.79	31.59
	Female	148	140	2,672	3,000	44.0	43.9	.429	.420	18.88	18.44
All occupations	Male	198	199	17,048	17,626	44.3	44.1	.937	.924	41.51	40.75
	Female	196	193	16,611	18,247	44.3	43.9	.548	.534	24.28	23.44
	Both sexes	198	200	33,659	35,873	44.3	44.0	.750	.731	33.23	32.16

Table 3 presents, for each city, 1928 average full-time hours per week, earnings per hour, and full-time earnings per week of employees in 9 of the selected occupations for which data are presented in Table 2. Of these 9 occupations data are shown for males and females in 3, for males only in 4, and for females only in 2. These occupations cover 72 per cent of the males and 68 per cent of the females included in the study.

For coat basters, male, the first occupation in the table, average full-time hours per week ranged by cities from 42.4 to 51, the average for all cities being 44.2 hours. Average earnings per hour ranged from 37.8 cents to $1.028, and the average for all cities was 90.5 cents. Average full-time earnings per week ranged from $19.28 to $45.23, and the average for all cities was $40.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR NINE SELECTED OCCUPATIONS, 1928, BY SEX AND CITY

City	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
	Basters, coat, male					Basters, coat, female				
Baltimore	2	36	44.0	$0.717	$31.55	3	135	44.0	$0.361	$15.88
Boston	4	83	42.4	.811	34.39	4	36	42.2	.473	19.96
Buffalo	3	5	44.0	.641	28.20	3	58	44.0	.522	22.97
Chicago	4	387	44.0	1.028	45.23	4	184	44.0	.808	35.52
Cincinnati	2	16	44.0	.768	33.79	3	34	44.0	.596	26.22
Cleveland	2	31	44.0	.923	40.61	3	107	44.0	.607	26.71
Newark	4	51	44.0	.857	37.71	4	39	44.0	.638	28.07
Northeastern New Jersey [1]	6	44	44.8	.746	33.42	5	31	46.0	.481	22.13
New York	42	699	44.6	.901	40.18	32	118	45.0	.625	28.13
Philadelphia	7	185	44.0	.841	37.00	7	162	44.0	.487	21.43
Eastern Pennsylvania [2]	2	3	51.0	.378	19.28	5	51	50.9	.339	17.28
Rochester	4	115	43.9	.969	42.54	4	249	42.1	.595	25.05
St. Louis	4	15	44.5	.717	31.91	5	51	44.1	.465	20.51
Total	86	1,670	44.2	.905	40.00	82	1,255	44.0	.557	24.51
	Cutter's, cloth, male					Hand sewers, coat, female				
Baltimore	3	94	44.0	$1.012	$44.53	3	292	44.0	$0.333	$14.65
Boston	4	103	43.0	1.114	47.90	4	224	42.0	.447	18.77
Buffalo	3	53	44.0	.955	42.02	3	88	44.0	.472	20.77
Chicago	4	554	44.0	1.095	48.18	4	932	44.0	.667	29.35
Cincinnati	5	193	41.9	1.320	55.31	5	226	40.6	.518	21.03
Cleveland	3	112	44.0	.983	43.25	3	276	44.0	.577	25.39
Newark	1	[3]	[3]	[3]	[3]	4	54	44.0	.476	20.94
Northeastern New Jersey [1]	5	23	46.7	.973	45.44	7	84	45.7	.426	19.47
New York	34	443	44.2	1.249	55.21	49	976	45.0	.530	23.85
Philadelphia	4	72	44.8	1.106	49.55	7	278	44.0	.444	19.54
Eastern Pennsylvania [2]	4	23	53.5	.666	35.63	5	26	50.9	.299	15.16
Rochester	4	250	43.1	1.169	50.38	4	479	43.0	.541	23.26
St. Louis	7	113	44.0	.945	41.58	6	168	44.2	.478	21.13
Total	81	2,048	43.8	1.129	49.45	104	4,103	43.9	.527	23.14

[1] Outside of Newark. [2] Outside of Philadelphia. [3] Data included in total.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR NINE SELECTED OCCUPATIONS, 1928, BY SEX AND CITY—Continued

City	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
	Operators, coat, male					Operators, coat, female				
Baltimore	2	73	44.0	$0.786	$34.58	3	377	44.0	$0.424	$18.66
Boston	4	110	42.5	.973	41.35	4	35	42.7	.489	20.88
Buffalo	3	10	44.0	.840	36.96	3	84	44.0	.650	28.60
Chicago	4	543	44.0	1.192	52.45	4	621	44.0	1.019	44.84
Cincinnati	5	52	41.5	1.265	52.50	6	575	38.1	.718	27.36
Cleveland	2	15	44.0	.892	39.25	3	352	44.0	.607	26.71
Newark	4	70	44.7	.915	40.90	4	49	44.0	.592	26.05
Northeastern New Jersey [1]	8	124	46.2	.852	39.36	8	188	47.1	.447	21.05
New York	50	1,204	44.3	1.018	45.10	23	107	45.1	.642	28.95
Philadelphia	7	213	44.0	.919	40.44	7	173	44.0	.529	23.28
Eastern Pennsylvania [2]	4	12	52.7	.527	27.77	5	124	51.2	.338	17.31
Rochester	4	102	43.8	.975	42.71	4	306	42.2	.645	27.22
St. Louis	4	34	44.5	.846	37.65	6	310	44.1	.469	20.68
Total	101	2,562	44.2	1.016	44.91	80	3,301	43.3	.632	27.37
	Operators, pants, male					Operators, pants, female				
Baltimore	3	94	44.7	$0.678	$30.31	4	175	44.8	$0.410	$18.37
Boston	4	44	43.5	.904	39.32	4	48	41.4	.540	22.36
Buffalo	3	7	44.0	.646	28.42	3	89	44.0	.441	19.40
Chicago	5	258	44.0	1.066	46.90	4	522	44.0	.880	38.72
Cincinnati	4	10	43.2	.797	34.43	5	222	40.7	.636	25.89
Cleveland	1	[3]	[3]	[3]	[3]	3	287	44.0	.566	24.90
Newark	2	32	44.0	.836	36.78	1	[3]	[3]	[3]	[3]
Northeastern New Jersey [1]	7	44	46.9	.570	26.73	7	131	47.6	.348	16.56
New York	36	874	44.0	.973	42.81	24	185	44.2	.552	24.40
Philadelphia	6	93	45.6	.745	33.97	6	127	44.5	.523	23.27
Eastern Pennsylvania [2]	2	9	49.8	.403	20.07	5	220	48.6	.385	18.71
Rochester	1	[3]	[3]	[3]	[3]	4	304	43.6	.645	28.12
St. Louis	4	39	43.2	.667	28.81	7	253	43.9	.468	20.55
Total	78	1,507	44.2	.919	40.62	77	2,581	44.3	.573	25.38
	Operators, vests, female					Pressers, coat, male				
Baltimore	4	106	44.0	$0.370	$16.28	3	114	44.0	$0.729	$32.08
Boston	2	11	40.4	.673	27.19	4	130	42.5	.848	36.00
Buffalo	3	47	44.0	.491	21.60	3	61	44.0	.747	32.87
Chicago	5	207	44.0	.633	27.85	4	849	44.0	1.030	45.32
Cincinnati	5	135	39.9	.595	23.74	5	182	42.0	.945	39.69
Cleveland	3	92	44.0	.679	29.88	3	105	44.0	.902	39.69
Newark	3	20	43.2	.743	32.10	3	92	44.0	.949	41.76
Northeastern New Jersey [1]	4	41	47.9	.462	22.13	8	129	45.9	.693	31.81
New York	19	108	44.4	.732	32.50	52	1,119	44.4	.960	42.62
Philadelphia	5	91	45.5	.464	21.11	7	320	44.0	.852	37.49
Eastern Pennsylvania [2]	2	66	49.4	.361	17.83	5	49	51.7	.494	25.54
Rochester	4	174	42.3	.693	29.31	4	366	43.0	.884	38.01
St. Louis	6	107	44.1	.472	20.82	6	120	44.1	.680	29.99
Total	65	1,205	43.8	.571	25.01	107	3,636	44.0	.912	40.13
	Pressers, pants, male					Pressers, vests, male				
Baltimore	3	39	44.7	$0.703	$31.42	3	17	44.0	$0.599	$26.36
Boston	4	28	42.6	.882	37.57	6	18	42.7	.841	35.91
Buffalo	3	21	44.0	.683	30.05	3	17	44.0	.612	26.93
Chicago	5	185	44.0	1.117	49.15	5	94	44.0	1.107	48.71
Cincinnati	5	50	42.7	.840	35.87	5	33	42.4	.758	32.14
Cleveland	2	34	44.0	.830	36.52	3	22	44.0	.866	38.10
Newark	2	12	44.0	.940	41.36	4	10	43.2	1.101	47.56
Northeastern New Jersey [1]	7	27	47.2	.637	30.07	4	15	48.1	.705	33.91
New York	35	241	44.1	.880	38.81	28	131	44.3	1.045	46.29
Philadelphia	6	40	45.3	.835	37.83	5	29	45.5	.594	27.03
Eastern Pennsylvania [2]	5	42	48.7	.504	24.54	3	23	49.5	.418	20.69
Rochester	4	77	43.6	.962	41.94	4	62	42.6	.987	42.05
St. Louis	7	51	43.7	.677	29.58	5	15	44.1	.710	31.31
Total	88	847	44.3	.870	38.54	78	486	44.2	.893	39.47

[1] Outside of Newark. [2] Outside of Philadelphia. [3] Data included in total.

Table 4 shows for each sex and for both sexes combined average full-time hours per week, earnings per hour, and full-time earnings per week for all the wage earners covered in each city in 1926 and in 1928.

Average full-time hours per week of males in 1926 ranged by cities from 42.1 to 50.5, and of females from 40 to 49.4. In 1928 the average for males ranged from 42.1 to 51.3 and for females from 39.6 to 49.6. The average for all males and females combined, or for the industry, ranged from 40.8 to 49.7 in 1926 and from 40.4 to 50.1 in 1928.

TABLE 4.—AVERAGE HOURS AND EARNINGS, 1926 AND 1928, BY SEX AND CITY

Sex and city	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
	1926	1928	1926	1928	1926	1928	1926	1928	1926	1928
Males										
Baltimore	6	5	1,078	661	44.1	44.1	$0.820	$0.721	$36.16	$31.80
Boston	20	11	807	668	44.1	42.7	.896	.893	39.51	38.13
Buffalo	9	7	241	256	44.0	44.3	.832	.722	36.61	31.98
Chicago	5	7	3,856	4,044	44.0	44.0	1.006	1.023	44.26	45.01
Cincinnati	8	6	689	762	42.1	42.1	.873	1.007	36.75	42.39
Cleveland	5	5	519	494	46.6	44.0	.825	.796	38.45	35.02
Newark	(1)	9	(1)	384	(1)	44.1	(1)	.933	(1)	41.15
Northeastern New Jersey [2]	(1)	14	(1)	554	(1)	46.3	(1)	.718	(1)	33.24
New York	91	100	6,876	6,258	44.3	44.2	.995	.983	44.08	43.45
Philadelphia	24	13	1,121	1,404	44.4	44.4	.821	.783	36.45	34.77
Eastern Pennsylvania [3]	11	9	308	285	50.5	51.3	.505	.474	25.50	24.32
Rochester	5	5	1,152	1,297	44.1	43.1	.934	.936	41.19	40.34
St. Louis	14	8	401	559	44.1	44.0	.742	.724	32.72	31.86
Total	198	199	17,048	17,626	44.3	44.1	.937	.924	41.51	40.75
Females										
Baltimore	6	5	1,912	1,721	44.2	44.4	.416	.371	18.39	16.47
Boston	20	11	649	567	44.0	42.2	.489	.465	21.52	19.62
Buffalo	9	7	499	554	44.0	44.1	.511	.468	22.48	20.64
Chicago	5	6	3,547	3,411	44.0	44.0	.745	.758	32.78	33.35
Cincinnati	8	7	1,271	1,582	40.0	39.6	.526	.593	21.04	23.48
Cleveland	5	5	1,681	1,578	46.0	44.0	.566	.575	26.04	25.30
Newark	(1)	9	(1)	250	(1)	44.2	(1)	.560	(1)	24.75
Northeastern New Jersey [2]	(1)	14	(1)	644	(1)	47.2	(1)	.384	(1)	18.12
New York	90	95	2,461	2,426	44.6	44.7	.541	.533	24.13	23.83
Philadelphia	24	13	878	1,294	44.0	44.2	.440	.420	19.36	18.56
Eastern Pennsylvania [3]	10	9	844	658	49.4	49.6	.356	.336	17.59	16.67
Rochester	5	5	2,143	2,347	44.3	42.8	.591	.575	26.18	24.61
St. Louis	14	8	726	1,215	44.1	44.1	.397	.436	17.51	19.23
Total	196	194	16,611	18,247	44.3	43.9	.548	.534	24.28	23.44
Males and females										
Baltimore	6	5	2,990	2,382	44.2	44.3	.570	.467	25.19	20.69
Boston	20	11	1,456	1,235	44.1	42.5	.719	.698	31.71	29.67
Buffalo	9	7	740	810	44.0	44.1	.619	.553	27.24	24.39
Chicago	5	7	7,403	7,455	44.0	44.0	.886	.915	38.98	40.26
Cincinnati	8	7	1,960	2,344	40.8	40.4	.656	.731	26.76	29.53
Cleveland	5	5	2,200	2,072	46.1	44.0	.629	.629	29.00	27.68
Newark	(1)	9	(1)	634	(1)	44.1	(1)	.794	(1)	35.02
Northeastern New Jersey [2]	(1)	14	(1)	1,198	(1)	46.8	(1)	.542	(1)	25.37
New York	91	100	9,337	8,684	44.4	44.4	.876	.859	38.89	38.14
Philadelphia	24	13	1,999	2,698	44.2	44.4	.660	.613	29.17	27.22
Eastern Pennsylvania [3]	11	9	1,152	943	49.7	50.1	.398	.381	19.78	19.09
Rochester	5	5	3,295	3,644	44.2	42.9	.716	.707	31.65	30.33
St. Louis	14	8	1,127	1,774	44.1	44.0	.522	.528	23.02	23.23
Total	198	200	33,659	35,873	44.3	44.0	.750	.731	33.23	32.16

[1] No data. [2] Outside of Newark. [3] Outside of Philadelphia.

Average earnings per hour of males in 1926 ranged by cities from 50.5 cents to $1.006, of females from 35.6 to 74.5 cents, and for both sexes combined from 39.8 to 88.6 cents per hour. The 1928 averages for males ranged from 47.4 cents to $1.023, for females from 33.6 to 75.8 cents, and for both sexes combined from 38.1 to 91.5 cents per hour.

Average full-time earnings per week of males in 1926 ranged by cities from $25.50 to $44.26, of females from $17.51 to $32.78, and for both sexes combined from $19.78 to $38.98 per week. The 1928 averages for males ranged from $24.32 to $45.01, for females from $16.47 to $33.35, and for both sexes combined, or for the industry by cities, from $19.09 to $40.26 per week.

Salaries of Teachers in Higher Educational Institutions

A STUDY of the salaries of teachers in the higher educational institutions of the United States in 1926–27 has been published by the General Education Board.[1] The information was obtained by the questionnaire method and the report is based on data supplied by 302 institutions—262 men's and coeducational institutions and 40 women's colleges—and by 11,361 teachers located in 369 institutions, all geographic divisions of the country being represented. The study was concerned primarily with colleges of arts, literature, and science.

The following table, taken from the report, shows the average salaries in 1926–27, with per cent of increase over 1919–20, by professional rank and by size of institution, Class A institutions being those with an enrollment of 1,000 and over; Class B, of between 500 and 1,000; and Class C, of under 500.

AVERAGE SALARIES OF TEACHERS IN 1926–27, AND PER CENT OF INCREASE OVER 1919–20, IN COLLEGES OF ARTS, LITERATURE, AND SCIENCE, BY PROFESSIONAL RANK AND BY SIZE OF INSTITUTION

Rank	Class A institutions		Class B institutions		Class C institutions		Total	
	Average salary, 1926–27	Per cent increase over 1919–20	Average salary, 1926–27	Per cent increase over 1919–20	Average salary, 1926–27	Per cent increase over 1919–20	Average salary, 1926–27	Per cent increase over 1919–20
Men's and coeducational institutions:								
Professor	$4,620	27.2	$3,355	45.7	$2,726	46.1	$3,847	34.5
Associate professor	3,547	31.1	2,741	38.6	2,435	35.4	3,305	30.3
Assistant professor	2,833	23.8	2,461	39.7	2,169	49.9	2,696	26.2
Instructor	2,000	32.4	1,890	42.7	1,623	44.1	1,947	34.8
Women's colleges:								
Professor	4,049	33.6	3,244	66.8	2,860	71.2	3,392	54.1
Associate professor	3,299	51.3	2,488	64.3	2,509	46.7	2,987	51.8
Assistant professor	2,666	33.3	2,283	62.7	2,058	64.8	2,496	38.8
Instructor	1,977	27.4	1,881	55.3	1,684	52.1	1,905	33.2
Total:								
Professor	4,573	27.7	3,344	47.6	2,748	50.2	3,798	36.4
Associate professor	3,514	33.8	2,702	44.5	2,457	39.0	3,256	33.9
Assistant professor	2,812	24.5	2,440	40.6	2,146	53.1	2,669	27.3
Instructor	1,997	31.6	1,888	44.5	1,639	46.3	1,941	34.6

[1] General Education Board. Occasional papers, No. 8: Teachers' salaries in certain endowed and State supported colleges and universities in the United States, with special reference to colleges of arts, literature, and science, 1926–27, by Trevor Arnett. New York, 61 Broadway, 1928.

It will be noted that there was considerable variation between the salaries in the different ranks and also as between the different sizes of institutions. For instance, in the men's and coeducational institutions group the salary range in Class A institutions was from $2,000 for an instructor to $4,620 for a professor, while in Class C institutions the range for the corresponding ranks was from $1,623 to $2,726. Similar differences were found in the women's colleges.

In the Class A and Class B women's colleges salaries were somewhat lower for all teaching positions than in the men's and coeducational institutions, but in Class C women's colleges the salaries of professors, associate professors, and instructors were higher than in the men's and coeducational institutions group.

The survey showed that the salaries of all classes of teachers combined increased 29.8 per cent between 1919–20, the date of the previous survey conducted by the General Education Board, and 1926–27. The report states that "this has been a real increase, for not only have the teachers received more dollars in payment for their services, but the purchasing power of the dollar has also increased during this period."

Total average salaries in 1926–27 in the different geographical divisions of the country ranged from $2,660 in the Southern States to $3,385 in the New England States, the general average for the country being $2,958. Wide variations were found in the percentages of increase in salaries from 1919–20 to 1926–27 in the different sections of the country and in the different types and sizes of institutions. In this connection the report states:

> For example, in men's and coeducational institutions the increase in 1926–27 over 1919–20 in the average salary of professors ranged for the New England States from 20.5 per cent in Class A to 42.4 per cent in Class B, whereas the corresponding increase for the Southern States ranged from 30.2 per cent in Class A to 63.3 per cent in Class B. Similarly, in women's colleges the per cent of increase in 1926–27 over 1919–20 in the average salary of professors ranged for the New England States from 36.6 per cent in Class A to 86.6 per cent in Class B, whereas the corresponding increase for the Southern States ranged from 37.7 per cent in Class A to 74 per cent in Class C.

Supplementary Income

OF THE 11,361 teachers replying to the questionnaire regarding supplementary earnings, 7,557, or 66.5 per cent, reported that they supplemented their salaries by earned income. In answer to the question as to whether the supplementary work was done from necessity or choice, 71.9 per cent reported that they did it from necessity and 28.1 per cent from choice. The report states that "apparently appreciable private income has little effect on whether or not the possessor does additional work. Of those who reported appreciable private income and who supplemented their salaries, 44.8 per cent stated that they did it from necessity." Appreciable private income was reported by 18.5 per cent of the 11,361 teachers.

For a group of 7,072 who furnished complete information, supplementary income ranged from less than $100 to $10,000 or more, the median being $522. Less than one-fourth earned as much as $1,000 or more and only 7.7 per cent as much as $2,000 or more; 77 teachers earned $5,000 or more and 13 earned $10,000 or more. The report comments that there is reason to believe that "the higher the pro-

fessional rank and the higher the regular salary, the larger the amount earned by additional work."

Of the professors, 76.2 per cent did extra work, compared with 52.4 per cent of the instructors. A little over 77 per cent of the married teachers reported supplementary work, as compared with 46.7 per cent of the single ones.

The supplementary work consisted of writing, extra teaching, institutional services, lectures, consulting, etc.

Earnings of Office Workers in New York State Factories

A TABULATION of the earnings of office workers in factories in New York State is made each October by the State department of labor. According to the latest tabulation the earnings of these workers were higher in October, 1928, than ever before. The detailed data, as published in the Industrial Bulletin for November, 1928, issued by the New York Department of Labor, are given below:

In October, 1928, the average weekly salary of these employees was $36.37, an increase of about 50 cents above the October, 1927, figure. In New York City salaries had risen 87 cents during the year and were practically $39 in October. In up-State offices, on the other hand, salaries had advanced only 30 cents.

The wide variation in the salaries of office workers and the uneven distribution of the higher paid technical people makes comparison of wage levels in different industries inadvisable. The figures do indicate, however, that the trend of earnings has been upward in practically all industries. The only group of industries where reduced earnings were at all common was the food and tobacco group, where the average earnings for all office employees dropped more than 80 cents.

The gain in office workers' earnings this year compared well with the gain in average earnings for all employees, the increase for all employees being only 2 cents greater than the increase for office workers alone. The rise in office workers' earnings since 1914, while not reaching the same heights that shop workers' earnings have reached, has been more even.

Firms employing about half of the office workers reported were able to give separate information for men and women. These figures indicate that the average earnings of men continue to be nearly twice as great as the average for women. This may be due partly to the fact that men are able to command somewhat higher salaries than women for the same grade of work. Most of the difference is probably due to the relatively large number of women in subordinate office positions and the relatively small number in higher paid technical and supervisory positions.

The level of salaries for both men and women office workers is somewhat higher in New York City than it is in the rest of the State. The relatively larger number of technical and supervisory people in certain of the larger up-State factories accounts for the higher average for men in some industries up-State. The average earnings for women were generally higher in New York City.

It is not possible to secure separate information for men and women in offices from identical firms each year. This fact makes the earnings of men and women published from year to year incomparable. The chief value of the separate figures for men and women lies in the indication they give of the rate at which women are advancing to the more highly paid positions. In 1923 and 1924 the average earnings for men were a little more than twice as great as those for women, in 1925 they were almost exactly twice as great and since then the two figures have moved each year a little nearer together.

TABLE 1.—AVERAGE WEEKLY EARNINGS OF OFFICE EMPLOYEES IN REPRESENTATIVE NEW YORK STATE FACTORIES

[The employees represented in this table are those who appear on factory office pay rolls, such as office clerks, stenographers, bookkeepers, accountants, cashiers, stock clerks, office managers, superintendents, etc.]

Industry	Number of employees in factory offices		Average weekly earnings of factory office employees		
	June, 1914	October, 1928	June, 1914	October, 1927	October, 1928
Stone, clay, and glass	607	769	$18.06	$34.40	$35.10
Metals and machinery	12,122	17,799	19.69	36.88	37.63
Wood manufactures	1,539	1,741	18.68	39.52	37.22
Furs, leather, and rubber goods	2,137	2,459	16.05	29.62	29.82
Chemicals, oils, paints, etc	3,795	4,224	16.24	32.64	33.38
Printing and paper goods	7,075	8,313	22.57	40.49	41.37
Textiles	1,502	2,154	16.60	29.85	30.81
Clothing and millinery	4,809	4,185	15.88	31.45	31.82
Food and tobacco	3,022	3,529	21.61	35.86	35.03
Water, light, and power	455	828	(1)	31.79	31.60
Total	37,336	46,348	19.18	35.88	36.37

1 Separate earnings not computed because of small number of employees.

TABLE 2.—AVERAGE WEEKLY EARNINGS OF OFFICE WORKERS IN FACTORIES

[Tabulation of office men and women not on fixed list basis as in case of main tabulation]

Industry	October, 1928					
	Men			Women		
	Total State	New York City	Up-State	Total State	New York City	Up-State
Metals and machinery	$44.92	$43.96	$45.22	$22.58	$24.22	$22.09
Wood manufactures	46.32	46.18	46.48	24.58	26.77	22.87
Furs, leather, and rubber goods	44.06	46.46	33.69	23.46	28.50	16.99
Chemicals, oils, paints, etc	47.86	46.92	48.35	23.30	23.78	22.95
Printing and paper goods	53.95	55.97	50.28	25.72	28.12	22.92
Textiles	39.82	38.14	43.49	22.98	23.99	21.72
Clothing and millinery	45.69	46.14	42.77	25.85	28.88	18.94
Food and tobacco	43.50	45.91	40.70	23.16	24.23	22.27
Total	46.70	47.98	45.52	24.05	26.55	21.93

Arbitrator Grants Wage Increases to German Metal Workers

THE decision of the German Minister of the Interior, acting as arbitrator in the metal workers' dispute, was handed down on December 21, according to an Associated Press dispatch of that date. The decision upheld the award of the preceding arbitrator and granted wage increases to the workers. An account of this dispute and of the legal points involved is given in an article on page 116 of this issue. The dispatch referred to above is as follows:

Wilhelm Karl Severing, Minister of the Interior, to-day handed down his decision as arbitrator in the iron and steel wage dispute of the Rhineland and Westphalia. He held that the original award of the first official arbitrator would be binding until the end of the year, and that a new schedule, drawn up by him, would then become effective until December 31, 1930.

The effect of the decision is to give increased wages and shorter working hours to employees over the protest of mill owners, who claimed that it would make

it impossible for them to compete in world markets. Rather than submit to the first award the industrialists shut down their plants, throwing 225,000 men out of work.

Herr Severing reminded both parties that they had agreed unconditionally to accept his ruling. He added that imposition of the original award was necessary in order to compel respect for arbitration.

The original award gave the men a wage of 85 pfennigs an hour. They had been receiving 78 pfennigs and had asked 90.

The 2-year arrangement announced by the cabinet minister will increase the lowest wages by 6 pfennigs hourly and reduce the working week to 57 hours for men who hitherto have worked 60 hours.

Wages and Working Conditions in Shanghai Leather Trade[1]

Tanneries

SHANGHAI tanneries are of three types: Modern, semimodern, and old time. About 10 are of the first type, among them the foreign-owned plants. They are well-financed, use machinery, and operate on a large scale. Most of the semimodern tanneries, of which there are between 40 and 50, are owned by Nanking capitalists. The only machinery that such establishments use is for the drums and tanning tanks. The old type tanneries are nothing more than workshops, run by members of a family or two or three partners laboring together. Primitive methods are used, and the leather turned out is of poor quality. The work place and the shop are in the same house. Even in the large tanneries the hands work under the immediate control of the proprietor or the technical expert, as no foremen are employed. The proprietor or the technical expert also fixes wages. In large tanneries the workers are entitled to a small portion of the yearly profits.

Labor Force

Of the tanneries owned by the Chinese, the Ching Yi has the largest number of workers—90 in the new plant and 30 in the old. The Wei Shih employs approximately 70, the Ta Nan and Lao Yung Sheng each 30 to 40, and the Wan Sun Yuan, about 20. The last-mentioned formerly employed more than 60 persons, but on account of a strike last year machinery was installed and the amount of work to be done by hand has been reduced.

Thirty-six semimodern tanneries together have 500 employees, while the 110 small workshops combined employ 450. Each of the 5 foreign-owned establishments employs more than 100. The number of tanners in Shanghai approximates 2,000, of whom less than one-third are skilled, including skin shavers or finishers and mechanics. A new employee can fit himself to become a mechanic in several months but it takes a half year's training to be shaver or finisher, upon whose skill the quality of the product greatly depends. It requires only a week's training to be a skin polisher. Other kinds of labor are performed by ordinary laborers who constitute approximately one-half of the tanners.

[1] Chinese Economic Journal, Shanghai, October, 1928, p. 846. Conversions into U. S. currency have been made on the basis of Chinese dollar = 50 cents.

An apprentice must serve 3 to 4 years before he is treated as a full-fledged worker. In the first year he is given a monthly allowance of 20 or 30 cents [U. S. 10 or 15 cents], in the second year 50 cents [U. S. 25 cents], and in the third or fourth year $1 [U. S. 50 cents] with free board and lodging. About 60 per cent of the hands come from Nanking and Shaohing, 30 per cent from Canton and Ningpo, the latter, though small in number, being far more skilled and mostly employed as mechanics and shavers in the large tanneries. The remaining 10 per cent is made up of immigrants from Anhwei and Shantung Provinces and Kiangsu districts north of the Yangtze River. Most of the hands are between 20 and 50, there being no children under 15.

Unionism and Industrial Relations

After the labor force in the Wei Shih tannery had organized the Tannery Workers' Union, a number of branch unions were established by workers in other tanneries owned by the Chinese. Approximately 70 per cent of the labor in such tanneries is unionized. In the Nanking group of tanneries, cordial relations are reported between the owners and their tanners, as "most of the workers are fellow townsmen of the employer, and in Chinese society this feeling of fellowship counts a good deal."

Although large numbers of the Nanking tanners are union members, they have never had a quarrel with employers in regard to an increase of wages or better working conditions. In other plants like the Wei Shih, etc., it has not been easy for the management to maintain discipline among the workers. In the tanneries owned by foreigners, unionism is not permitted. The Chinese tanneries are frequently faced with labor unrest.

Wages

Monthly wages in the modern tanning plants run from $14 to $30 (U. S. $7 to $15)—sometimes $40 or $45 (U. S. $20 or $22.50)—with no board and lodging. In the semimodern and small tanneries the scale ranges from $7 to $15 (U. S. $3.50 to $7.50) with free board and lodging. Approximately 75 per cent of the workers in the Chinese-owned plants are housed and boarded free, which is not the case with the workers in the foreign-owned tanneries. Laborers hired for short periods, particularly the common coolies, receive from 40 to 50 cents (U. S. 20 to 25 cents) a day without board and lodging.

The daily working period is from 7.30 a. m. to 5 p. m. with one hour's rest after the midday meal. If extra work is required, three hours' work at night is paid half a day's extra wage, and six hours, a whole day's wage. The men work on Sundays but are entitled to two holidays a month besides festivals and national holidays. Those working on holidays receive double pay. At the end of a year, one month's extra pay is given. The Nanking group tanneries give a bonus of 1 cent (U. S. one-half cent) for turning out a piece of kid, and 5 cents (U. S. 2.5 cents) for a piece of cowhide. The "unionists" recently demanded a yearly increase of wages according to seniority of service, irrespective of merit.

Shoemaking and Leather Manufacture

THE estimated number of leather manufacturers and shoemakers in Shanghai, including those in the Chinese City is 330, whose combined capital approximates $2,000,000 (U. S. $1,000,000). About 30 per cent of the total number have between $1,000 and $5,000 (U. S. $500 and $2,500), 50 per cent have about $5,000 (U. S. $2,500) and 20 per cent between $10,000 and $50,000 (U. S. $5,000 and $25,000).

The business does not call for much capital, most of the work being done by hand. Sometimes, however, machines are used by the military leather manufacturers. The great majority of the big establishments are located in the International Settlement, and the small plants at Chapei and Nantao.

There are 2,500 artisans employed in the 330 workshops. The three well-defined operations are: The cutting of the leather—which is highly skilled work; the sewing together of the surface and lining; and finishing. Metal and riveting on trunks and suit cases are in general done by brass smiths on contract.

In the leather manufacturer's shops, the hands are paid on piecework basis at about 6 to 7 cents (U. S. 3 to 3.5 cents) for making each inch of bellows-topped suit cases (about $1.50 for a 20-inch case [U. S. 75 cents]), and 5 cents (U. S. 2.5 cents) for an inch of flat-topped case. In sewing, apprentices are generally employed. Apprentices may be taken by a journeyman or a master worker who takes the pay and provides them with free board and lodging and a meager monthly allowance. Apprenticeship covers three to four years, but a boy can do ordinary work after a year's training. Three journeymen working together can turn out in a day three 20-inch flat-topped suit cases, or six 8-12 inch cases. Bellows-topped cases require more work. A skilled and fast worker can earn $1.30 (U. S. 65 cents) a day, a second rate man, $1 (U. S. 50 cents), and a third rate man, 60 to 70 cents (U. S. 30 to 35 cents). The workers on piece rate must pay for their food and lodging. Those regularly employed receive from $12 to $25 (U. S. $6 to $12.50), with free board and lodging.

The greater number of these wage earners are natives of Shanghai, the most skilled, however, are from Ningpo and Kwangtung. About 50 per cent of the workers are union members. "Pieceworkers keep their own hours"; for those employed by the month, the work period is about 10 hours a day. Both piece and time workers are paid at the close of each month and may get an advance when in need. In the leather manufacturing shops, the piece rate is the general method of payment, while in shoemaking shops the men are usually on a monthly wage basis. In addition to national holidays and festivals the men have two days off each month.

Wages in Various Industries in Germany in 1928

THE data presented below regarding wages and earnings in various industries in Germany are taken from the statistical yearbook of Germany for 1928.[1] Detailed statistics of earnings by occupations in the textile industry, based on a special investigation for September, 1927, were given in the Labor Review for July, 1928, and are not repeated here.

Conversions into United States currency have been made on the par basis of the mark.

[1] Germany. Statistisches Reichsamt. Statistisches Jahrbuch für das Deutsch Reich, 1928. Berlin, 1928.

TABLE 1.—AVERAGE DAILY EARNINGS[1] OF WORKERS[2] IN GERMAN COAL MINES

[Conversion to United States currency made on the basis of mark=$0.2382]

Year and month	Upper Silesia		Lower Silesia		Ruhr district		Aachen		Saxony		Weighted average	
	Miners	Surface workers	Miners	Surface workers	Miners	Surface workers	Miners	Surface workers	Miners	Surface workers	Miners	Surface workers
1913	$1.40	$0.729	$1.04	$0.738	$1.62	$1.04	$1.43	$0.941	$1.19	$0.931	$1.55	$0.941
1927 (April)	1.87	1.15	1.56	1.15	2.16	1.56	1.99	1.38	1.74	1.38	2.10	1.48
1928 (April)	2.00	1.21	1.67	1.30	2.30	1.64	2.07	1.44	1.89	1.48	2.23	1.57

[1] Include social allowances, but not overtime earnings.
[2] Female and juvenile workers are excluded.

TABLE 2.—WAGE RATES PER HOUR AND PER WEEK FOR SKILLED AND UNSKILLED WORKERS, BY INDUSTRY AND YEAR

[Conversions to United States currency made on the basis of mark=$0.2382]

Industry	Rate per hour			Rate per week		
	1913	1927	1928	1913	1927	1928
	Skilled workers					
Coal mines	$0.230	$0.301	$0.321	$9.30	$12.19	$12.95
Metal	.189	.272	.290	8.79	11.46	11.96
Chemicals	.161	.261	.276	7.86	10.55	11.15
Building	.203	.336	.351	9.02	13.51	14.12
Wood	.177	.285	.319	7.74	11.41	12.77
Paper	.092	.207	.222	5.14	8.37	8.99
Printing	.173	.291	.317	7.54	11.77	12.80
Textile (male)	.127	.193	.215	6.11	7.80	8.69
Textile (female)	.087	.138	.157	4.16	5.59	6.35
Breweries	.191	.299	.336	8.89	12.07	13.59
Baking and confectionery	.143	.252	.272	6.87	10.19	11.00
Paper box manufacturing (male)	.136	.219	.249	6.40	8.85	10.07
Paper box manufacturing (female)	.079	.144	.166	3.64	5.82	6.70
All industries	.186	.273	.291	8.26	11.23	11.89
	Unskilled workers					
Coal mines	$0.102	$0.173	$0.200	$5.65	$8.65	$9.18
Metal	.120	.191	.204	5.61	8.01	8.42
Chemicals	.130	.220	.232	6.37	8.88	9.39
Building	.160	.274	.287	7.09	11.00	11.55
Wood	.128	.247	.275	5.62	9.89	11.01
Paper	.083	.186	.200	4.22	7.51	8.06
Printing	.137	.254	.276	6.00	10.24	11.14
Textile (male)	.098	.162	.181	4.74	6.56	7.31
Textile (female)	.071	.114	.126	3.49	4.60	5.10
Breweries	.155	.264	.299	7.20	10.66	12.09
Baking and confectionery	.116	.218	.235	5.59	8.79	9.50
Paper box manufacturing (male)	.101	.186	.211	4.62	7.52	8.52
Paper box manufacturing (female)	.072	.119	.137	3.26	4.80	5.53
All industries	.112	.196	.214	5.53	8.46	9.00

TABLE 3.—WEEKLY WAGE RATES IN INLAND NAVIGATION IN GERMANY[1]

[Conversion to United States currency made on the basis of mark=$0.2382]

Waterway	Year	Captains	Mates	Engineers	Sailors	Cabin boys	Stokers
Rhine	1927	$16.95–20.00	$12.51–13.51	$16.95–20.00	$9.29–11.74	$7.17	$10.72–11.51
Western canals	1928	13.71–13.86	----------	13.71–13.86	6.09– 7.95	4.51	8.74
Weser and Aller Rivers	1928	11.62–13.79	9.89–12.45	11.06–13.23	6.00– 8.17	3.78	7.17– 8.17
Harbor of Hamburg	1928	14.01	----------	14.01	6.30–12.61	------	12.61
Harbor of Stettin	1928	12.55	11.29	12.55	10.17	5.07	10.17

[1] Besides wages, sleeping quarters with light and heat and the usual allowances are given free.

TREND OF EMPLOYMENT

Summary for November, 1928

EMPLOYMENT decreased 0.5 per cent in November, 1928, and pay-roll totals decreased 3 per cent, according to returns made to the Bureau of Labor Statistics.

The lines of employment surveyed, the number of establishments reporting in each line, and the number of employees covered, together with total pay rolls for one week, for both October and November, are shown in the following statement:

PER CENT OF CHANGE IN EACH LINE OF EMPLOYMENT—OCTOBER TO NOVEMBER, 1928

Line of employment	Establishments	Employment		Per cent of change	Pay roll		Per cent of change
		October	November		October	November	
1. Manufacturing	11,954	3,308,138	3,273,766	[1]−0.5	$91,287,503	$87,870,491	[1]−2.8
2. Coal mining:							
Anthracite	57	38,782	39,321	+1.4	1,330,195	1,247,513	−6.2
Bituminous	566	113,514	118,998	+4.8	3,044,987	3,145,959	+3.3
3. Metalliferous mining	123	29,939	30,316	+1.3	903,123	911,603	+0.9
4. Public utilities	5,259	471,757	471,084	−0.1	14,051,451	13,886,101	−1.2
5. Trade:							
Wholesale	1,064	35,675	35,362	−0.9	1,044,816	1,023,717	−2.0
Retail	1,663	136,863	144,772	+5.8	3,287,743	3,423,883	+4.1
6. Hotels	315	55,821	55,201	−1.1	[2] 967,584	[2] 957,099	−1.1
Total	**21,001**	**4,190,489**	**4,168,820**	**−0.5**	**115,917,400**	**112,466,366**	**−3.0**

[1] Weighted per cent of change; the remaining per cents of change, including total, are unweighted.
[2] Cash payments only; see text, p. 157.

A slight falling off in employment is customary in November, the peak of autumn employment being reached in October, while pay-roll totals are likely to be considerably diminished by the general stoppage of work on election day, and the observance of armistice day and some days of church celebration.

1. Employment in Selected Manufacturing Industries in November, 1928

EMPLOYMENT in *manufacturing* industries *decreased* 0.5 per cent in November, 1928, as compared with October, and pay-roll totals decreased 2.8 per cent, as shown by returns from 11,954 establishments in 54 of the principal manufacturing industries of the United States. These establishments in November had 3,273,766 employees whose combined earnings in one week were $87,870,491.

The Bureau of Labor Statistics' weighted index of employment in manufacturing industries for November, 1928, is 87.7, as compared with 88.1 for October, 1928, 87.3 for September, 1928, and 85.9 for November, 1927; the weighted index for pay-roll totals for November, 1928, is 92.1, as compared with 94.8 for October, 1928, 91.4 for September, 1928, and 87.8 for November, 1927. The monthly average for 1923 = 100.

Comparison of Employment and Pay-Roll Totals in October and November, 1928

TWENTY-SIX of the 54 separate industries and 5 of the 12 groups of industries had more employees in November, 1928, than in October, but only 18 industries and 2 groups of industries showed higher pay-roll totals.

The notable increases in employment in separate industries were in slaughtering and meat packing, cotton goods, woolen and worsted goods, dyeing and finishing textiles, machine tools, pianos, and shipbuilding; the iron and steel industry showed a gain of 1.7 per cent. Increased employment was shown in the textile, iron and steel, paper, and nonferrous metal groups, and in the group of miscellaneous industries.

The outstanding decrease in employment in November was one of 9 per cent, in the automobile industry. Other industries reporting a considerable falling off in employment were confectionery, ice cream, men's clothing, women's clothing, cast-iron pipe, steam fittings, leather, boots and shoes, fertilizer, cement, glass, and automobile tires, most of these being seasonal in character.

Of the 9 geographic divisions the 3 divisions along the Atlantic seaboard and the 2 South Central divisions showed gains in employment in November.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
Food and kindred products	**1,638**	**231,874**	**231,428**	(1)	**$5,936,698**	**$5,892,082**	(1)
Slaughtering and meat packing	200	85,603	88,233	+3.1	2,238,460	2,324,655	+3.9
Confectionery	299	40,531	39,260	−3.1	747,520	705,354	−5.6
Ice cream	248	9,786	9,074	−7.3	325,102	303,755	−6.6
Flour	347	16,801	16,672	−0.8	469,222	438,626	−6.5
Baking	528	67,876	66,942	−1.4	1,811,107	1,791,097	−1.1
Sugar refining, cane	16	11,277	11,247	−0.3	345,287	328,595	−4.8
Textiles and their products	**2,152**	**608,240**	**615,677**	(1)	**12,141,687**	**11,956,113**	(1)
Cotton goods	470	209,365	215,564	+3.0	3,297,772	3,410,084	+3.4
Hosiery and knit goods	329	91,929	93,202	+1.4	1,793,659	1,767,859	−1.4
Silk goods	284	66,462	65,644	−1.2	1,452,019	1,357,091	−6.5
Woolen and worsted goods	192	63,850	66,075	+3.5	1,465,819	1,475,580	+0.7
Carpets and rugs	30	24,245	24,674	+1.8	626,643	637,107	+1.7
Dyeing and finishing textiles	103	30,042	30,823	+2.6	756,446	776,108	+2.6
Clothing, men's	334	64,021	62,086	−3.0	1,475,089	1,352,339	−8.3
Shirts and collars	126	22,745	22,908	+0.7	376,872	374,431	−0.6
Clothing, women's	208	24,414	23,782	−2.6	638,999	558,313	−12.6
Millinery and lace goods	76	11,167	10,919	−2.2	258,369	247,201	−4.3
Iron and steel and their products	**1,828**	**678,534**	**684,073**	(1)	**21,081,732**	**21,009,990**	(1)
Iron and steel	208	269,986	274,448	+1.7	8,758,088	8,833,116	+0.9
Cast-iron pipe	38	12,098	11,531	−4.7	272,647	262,550	−3.7
Structural ironwork	160	25,961	25,907	−0.2	798,059	787,972	−1.3
Foundry and machine-shop products	984	248,966	250,758	+0.7	7,646,242	7,556,231	−1.2
Hardware	70	31,607	32,066	+1.5	820,168	835,507	+1.9
Machine tools	147	34,086	35,346	+3.7	1,141,098	1,185,110	+3.9
Steam fittings and steam and hot-water heating apparatus	111	35,087	33,596	−4.2	1,024,457	966,116	−5.7
Stoves	110	20,743	20,421	−1.6	620,673	583,388	−6.0
Lumber and its products	**1,373**	**247,435**	**246,971**	(1)	**5,606,756**	**5,517,243**	(1)
Lumber, sawmills	633	147,610	146,401	−0.8	3,097,438	3,022,223	−2.4
Lumber, millwork	313	33,035	33,324	+0.9	811,288	792,648	−2.3
Furniture	427	66,790	67,246	+0.7	1,698,030	1,702,372	+0.3
Leather and its products	**362**	**124,993**	**118,027**	(1)	**2,855,574**	**2,393,955**	(1)
Leather	130	26,949	26,063	−3.3	677,746	638,902	−5.7
Boots and shoes	232	98,044	91,964	−6.2	2,177,828	1,755,053	−19.4

See footnote at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
Paper and printing	**1,098**	**199,317**	**201,835**	(1)	**$6,587,253**	**$6,605,434**	(1)
Paper and pulp	218	59,226	59,758	+0.9	1,609,291	1,611,965	+0.2
Paper boxes	186	20,763	21,179	+2.0	482,818	498,336	+3.2
Printing, book and job	316	53,681	54,310	+1.2	1,886,055	1,851,035	−1.9
Printing, newspapers	378	65,647	66,588	+1.4	2,609,089	2,644,098	+1.3
Chemicals and allied products	**382**	**95,624**	**95,173**	(1)	**2,837,287**	**2,806,859**	(1)
Chemicals	146	38,173	38,477	+0.8	1,087,561	1,079,560	−0.7
Fertilizers	179	11,358	10,796	−4.9	219,694	207,674	−5.5
Petroleum refining	57	46,093	45,900	−0.4	1,530,032	1,519,625	−0.7
Stone, clay, and glass products	**958**	**126,853**	**123,607**	(1)	**3,351,717**	**3,227,307**	(1)
Cement	109	26,197	25,286	−3.5	783,690	728,414	−7.1
Brick, tile, and terra cotta	604	40,953	39,972	−2.4	1,035,568	994,754	−3.9
Pottery	126	21,411	21,230	−0.8	524,699	514,007	−2.0
Glass	119	38,292	37,119	−3.1	1,007,760	990,132	−1.7
Metal products, other than iron and steel	**225**	**52,265**	**53,373**	(1)	**1,453,674**	**1,473,712**	(1)
Stamped and enameled ware	73	19,158	19,432	+1.4	477,889	480,854	+0.6
Brass, bronze, and copper products	152	33,107	33,941	+2.5	975,785	992,858	+1.7
Tobacco products	**257**	**68,162**	**68,059**	(1)	**1,149,025**	**1,132,858**	(1)
Chewing and smoking tobacco and snuff	30	8,836	8,927	+1.0	147,550	136,979	−7.2
Cigars and cigarettes	227	59,326	59,132	−0.3	1,001,475	995,879	−0.6
Vehicles for land transportation	**1,205**	**603,650**	**563,766**	(1)	**20,182,970**	**17,942,818**	(1)
Automobiles	211	438,703	399,001	−9.0	15,125,880	12,922,752	−14.6
Carriages and wagons	54	1,535	1,502	−2.1	35,707	34,384	−3.7
Car building and repairing, electric-railroad	383	27,329	27,199	−0.5	863,944	853,311	−1.2
Car building and repairing, steam-railroad	557	136,083	136,064	−(2)	4,157,439	4,132,371	−0.6
Miscellaneous industries	**476**	**271,191**	**271,777**	(1)	**8,103,130**	**7,912,120**	(1)
Agricultural implements	90	27,295	27,963	+2.4	816,406	829,601	+1.6
Electrical machinery, apparatus and supplies	170	127,303	128,172	+0.7	3,813,453	3,747,647	−1.7
Pianos and organs	78	10,138	10,473	+3.3	310,009	323,044	+4.2
Rubber boots and shoes	12	18,702	19,002	+1.6	447,869	457,408	+2.1
Automobile tires	44	60,842	58,301	−4.2	1,927,432	1,761,076	−8.6
Shipbuilding	82	26,911	27,866	+3.5	787,961	793,344	+0.7
All industries	**11,954**	**3,308,138**	**3,273,766**	(1)	**91,287,503**	**87,870,491**	(1)

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION							
New England [3]	1,433	398,348	401,200	+0.7	$9,924,764	$9,775,013	−1.5
Middle Atlantic [4]	2,810	855,485	857,503	+0.2	24,789,809	24,446,775	−1.4
East North Central [5]	3,018	1,166,232	1,128,729	−3.2	36,485,866	34,058,015	−6.7
West North Central [6]	1,083	171,353	168,196	−1.8	4,399,694	4,077,983	−7.3
South Atlantic [7]	1,515	335,794	339,169	+1.0	6,615,650	6,615,752	+(2)
East South Central [8]	623	122,298	123,734	+1.2	2,325,902	2,335,326	+0.4
West South Central [9]	490	86,288	86,609	+0.4	1,933,082	1,907,623	−1.3
Mountain [10]	214	32,560	32,261	−0.9	907,145	892,471	−1.6
Pacific [11]	768	139,780	136,365	−2.4	3,905,591	3,761,533	−3.7
All divisions	**11,954**	**3,308,138**	**3,273,766**	(1)	**91,287,503**	**87,870,491**	(1)

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[2] Less than one-tenth of 1 per cent.

[3] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

[4] New Jersey, New York, Pennsylvania.

[5] Illinois, Indiana, Michigan, Ohio, Wisconsin.

[6] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

[7] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.

[8] Alabama, Kentucky, Mississippi, Tennessee.

[9] Arkansas, Louisiana, Oklahoma, Texas.

[10] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.

[11] California, Oregon, Washington.

TABLE 2.—PER CENTS OF CHANGE, OCTOBER TO NOVEMBER, 1928—12 GROUPS OF INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change, October to November, 1928		Group	Per cent of change, October to November, 1928	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	−0.4	−0.8	Metal products, other than iron and steel	+2.1	+1.6
Textiles and their products	+0.7	−3.0	Tobacco products	−0.1	−1.2
Iron and steel and their products	+0.9	−0.2	Vehicles for land transportation	−4.8	−8.1
Lumber and its products	−0.2	−1.6	Miscellaneous industries	+0.9	−1.6
Leather and its products	−5.4	−15.1			
Paper and printing	+1.3	+0.2	**All industries**	**−0.5**	**−2.8**
Chemicals and allied products	−0.5	−1.3			
Stone, clay, and glass products	−2.6	−3.2			

Comparison of Employment and Pay-roll Totals in November, 1928, and November, 1927

THE level of employment in manufacturing industries in November, 1928, was 2.1 per cent higher than in November, 1927, and pay-roll totals were 4.9 per cent higher.

One-half of the 12 groups of industries and nearly one-half of the 54 separate industries had more employees in November, 1928, than in November, 1927, the outstanding *group* increases over the 12-month period having been in the iron and steel, vehicle, and nonferrous metal groups, and the notable *industry* increases in iron and steel, foundry and machine-shop products, machine tools, brass-bronze-copper products, automobiles, agricultural implements, and automobile tires.

The East North Central geographic division showed an increase of nearly 15 per cent in this comparison, but the 3 other increases and the 5 decreases in employment were all comparatively small.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS, NOVEMBER, 1928, WITH NOVEMBER, 1927

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, November, 1928, compared with November, 1927		Industry	Per cent of change, November, 1928, compared with November, 1927	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	+0.7	+1.3	**Chemicals and allied products**	+1.3	+2.2
Slaughtering and meat packing	+2.0	+3.7	Chemicals	+0.7	+1.7
Confectionery	+0.2	−0.6	Fertilizers	+3.4	+2.4
Ice cream	−1.1	(1)	Petroleum refining	+1.4	+2.7
Flour	+1.6	+0.5			
Baking	−0.4	−0.4	**Stone, clay, and glass products**	−4.4	−2.2
Sugar refining, cane	−0.3	+1.9	Cement	−8.4	−9.9
			Brick, tile, and terra cotta	−5.8	−6.2
Textiles and their products	−3.9	−3.9	Pottery	+2.2	−3.5
Cotton goods	−8.3	−10.3	Glass	−4.4	+4.0
Hosiery and knit goods	−5.9	−4.8			
Silk goods	+1.0	+3.0	**Metal products, other than iron and steel**	+10.3	+22.9
Woolen and worsted goods	−0.7	−1.0	Stamped and enameled ware	+3.2	+3.9
Carpets and rugs	+3.2	+0.2	Brass, bronze, and copper products	+13.2	+29.5
Dyeing and finishing textiles	−1.2	+2.4			
Clothing, men's	−5.7	−5.5	**Tobacco products**	−2.8	−4.6
Shirts and collars	−5.0	−6.1	Chewing and smoking tobacco and snuff	−6.3	−6.2
Clothing, women's	+3.4	+1.1	Cigars and cigarettes	−2.3	−4.4
Millinery and lace goods	−4.2	−4.6			
			Vehicles for land transportation	+13.4	+14.6
Iron and steel and their products	+8.2	+16.4	Automobiles	+37.6	+40.3
Iron and steel	+5.9	+16.5	Carriages and wagons	+0.8	+6.2
Cast-iron pipe	−7.3	−0.4	Car building and repairing, electric-railroad	−8.0	−7.9
Structural ironwork	+6.9	+14.4	Car building and repairing, steam-railroad	−3.9	−3.0
Foundry and machine-shop products	+10.4	+17.0			
Hardware	+2.3	+9.2	**Miscellaneous industries**	+1.4	+1.3
Machine tools	+28.9	+42.3	Agricultural implements	+24.4	+29.6
Steam fittings and steam and hot-water heating apparatus	−10.1	−4.7	Electrical machinery, apparatus, and supplies	+5.2	+9.1
Stoves	+2.1	+3.1	Pianos and organs	−13.3	−10.7
			Rubber boots and shoes	−5.6	−11.2
Lumber and its products	−1.6	−2.4	Automobile tires	+17.3	+23.1
Lumber, sawmills	−1.8	−4.0	Shipbuilding	−9.3	−11.6
Lumber, millwork	+0.1	+0.3			
Furniture	−1.7	+0.5	**All industries**	+2.1	+4.9
Leather and its products	−5.4	−8.4			
Leather	−6.7	−7.4			
Boots and shoes	−5.0	−9.0			
Paper and printing	−0.3	+0.5			
Paper and pulp	−1.9	+0.4			
Paper boxes	−1.3	+3.7			
Printing, book and job	−1.8	−3.0			
Printing, newspapers	+2.8	+2.9			

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION [2]			GEOGRAPHIC DIVISION [2]		
New England	−2.7	+0.2	West South Central	+0.1	+1.8
Middle Atlantic	−0.8	+2.7	Mountain	−0.5	+2.0
East North Central	+14.8	+20.8	Pacific	+0.2	−0.4
West North Central	+1.1	−0.9			
South Atlantic	−1.1	+1.4	**All divisions**	+2.1	+4.9
East South Central	−0.7	+0.2			

[1] No change.

[2] See footnotes 3 to 11, p. 144.

Per Capita Earnings

PER CAPITA earnings of employees in the combined 54 manufacturing industries in November, 1928, were 2.4 per cent lower than in October, 1928, and 2.7 per cent higher than in November, 1927.

In November, 1928, 11 of the 54 separate industries showed increased per capita earnings as compared with October, 1928, while 32 industries showed increased per capita earnings as compared with November, 1927.

The notable increases in per capita earnings over the 12-month period, November, 1927, to November, 1928, were in the iron and steel, structural iron, cast-iron pipe, machine-tool, glass, and brass industries.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS, NOVEMBER, 1928, WITH OCTOBER, 1928, AND NOVEMBER, 1927

Industry	Per cent of change November, 1928, compared with—		Industry	Per cent of change November, 1928, compared with—	
	October, 1928	November, 1927		October, 1928	November, 1927
Glass	+1.3	+8.6	Steam fitting and steam and hot-water heating apparatus	−1.5	+6.3
Paper boxes	+1.2	+5.2	Brick, tile, and terra cotta	−1.6	−0.9
Cast-iron pipe	+1.0	+7.1	Carriages and wagons	−1.6	+5.2
Pianos and organs	+0.9	+2.8	Lumber, sawmills	−1.6	−2.3
Ice cream	+0.8	+1.1	Foundry and machine-shop products	−1.9	+5.9
Slaughtering and meat packing	+0.8	+1.9	Millinery and lace goods	−2.2	−0.5
Rubber boots and shoes	+0.5	−6.0	Electrical machinery, apparatus, and supplies	−2.4	+3.6
Cotton goods	+0.4	−2.1	Confectionery	−2.5	−0.5
Hardware	+0.4	+6.4	Leather	−2.5	−0.8
Baking	+0.3	−0.1	Woolen and worsted goods	−2.7	−0.4
Machine tools	+0.1	+9.9	Hosiery and knit goods	−2.8	+0.8
Dyeing and finishing textiles	(1)	+3.4	Shipbuilding	−2.8	−2.6
Carpets and rugs	−0.1	−3.0	Printing, book and job	−3.0	−1.2
Printing, newspapers	−0.1	+0.2	Lumber, millwork	−3.1	+0.3
Cigars and cigarettes	−0.2	−2.2	Cement	−3.7	−1.3
Petroleum refining	−0.2	+1.4	Stoves	−4.5	+1.0
Furniture	−0.4	+2.3	Automobile tires	−4.6	+4.7
Fertilizers	−0.5	−0.6	Sugar refining, cane	−4.6	+1.8
Car building and repairing, steam-railroad	−0.6	+1.0	Silk goods	−5.4	+1.9
Brass, bronze, and copper products	−0.7	+14.4	Clothing, men's	−5.5	−0.2
Paper and pulp	−0.7	+2.0	Flour	−5.8	−1.1
Agricultural implements	−0.8	+4.1	Automobiles	−6.1	+2.2
Car building and repairing, electric-railroad	−0.8	(1)	Chewing and smoking tobacco and snuff	−8.1	+0.3
Iron and steel	−0.8	+10.0	Clothing, women's	−10.3	−2.5
Stamped and enameled ware	−0.8	+0.6	Boots and shoes	−14.1	−4.5
Structural ironwork	−1.1	+7.0			
Pottery	−1.2	−5.3	**All industries**	**−2.4**	**+2.7**
Shirts and collars	−1.4	−1.1			
Chemicals	−1.5	+1.2			

[1] No change.

Wage Changes

SIXTY establishments in 17 industries reported wage-rate increases made during the month ending November 15, 1928. These increases averaged 5.5 per cent and affected 3,762 employees, or 22 per cent of all employees in the establishments concerned.

Thirty-three establishments in eight industries reported wage-rate decreases made during the same period. These decreases averaged 5 per cent and affected 9,108 employees, or 91 per cent of all employees in the establishments concerned.

TABLE 5.—WAGE ADJUSTMENTS OCCURRING BETWEEN OCTOBER 15 AND NOVEMBER 15, 1928

Industry	Establishments		Per cent of increase or decrease in wage rates		Employees affected		
						Per cent of employees	
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Confectionery	299	2	7.0–9.4	7.2	61	35	(1)
Baking	528	3	6.5–7.0	6.5	62	8	(1)
Cotton goods	470	4	5.0–10.0	5.5	1,123	99	1
Hosiery and knit goods	329	1	10.0	10.0	39	8	(1)
Woolen and worsted goods	192	1	5.0	5.0	15	6	(1)
Iron and steel	208	5	2.0–3.0	2.2	1,080	38	(1)
Machine tools	147	7	3.4–10.0	5.9	121	14	(1)
Lumber, millwork	313	1	5.0–7.5	6.3	30	18	(1)
Furniture	427	7	6.0–31.0	12.9	172	5	(1)
Paper boxes	186	2	5.0–10.0	7.0	20	7	(1)
Printing, book and job	316	3	2.8–7.5	3.2	145	15	(1)
Printing, newspapers	378	8	1.0–6.7	3.3	207	27	(1)
Chemicals	146	2	5.0–10.0	9.1	173	8	(1)
Pottery	126	2	6.5–12.5	12.4	304	54	1
Glass	119	2	9.0–9.3	9.1	44	4	(1)
Car building and repairing, steam-railroad	557	9	5.0–7.0	5.1	136	12	(1)
Agricultural implements	90	1	2.0	2.0	30	50	(1)
			Decreases				
Cotton goods	470	12	5.0	5.0	7,779	100	4
Lumber, sawmills	633	2	10.0	10.0	58	27	(1)
Lumber, millwork	313	2	10.0–20.0	18.3	150	30	(1)
Furniture	427	2	5.5–10.0	9.2	22	8	(1)
Fertilizers	179	1	2.5	2.5	37	100	(1)
Brick, tile, and terra cotta	604	2	10.0–20.0	15.0	10	29	(1)
Pottery	126	1	10.0	10.0	77	100	(1)
Car building and repairing, steam-railroad	557	11	2.0	2.0	975	90	1

[1] Less than one-half of 1 per cent.

Indexes of Employment and Pay-Roll Totals in Manufacturing Industries

INDEX numbers for November, October, and September, 1928, and for November, 1927, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 6.

The general index of employment for November, 1928, is 87.7, this number being 0.5 per cent lower than the index for October, 1928, 0.5 per cent higher than the index for September, 1928, and 2.1 per cent higher than the index for November, 1927. The general index for pay-roll totals in November, 1928, is 92.1, this number being 2.8 per cent lower than the index for October, 1928, 0.8 per cent higher than the index for September, 1928, and 4.9 per cent higher than the index for November, 1927.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—NOVEMBER, 1927, AND SEPTEMBER, OCTOBER, AND NOVEMBER, 1928

[Monthly average, 1923=100]

Industry	Employment				Pay-roll totals			
	1927	1928			1927	1928		
	November	September	October	November	November	September	October	November
General index	**85.9**	**87.3**	**88.1**	**87.7**	**87.8**	**91.4**	**94.8**	**92.1**
Food and kindred products	**90.9**	**89.8**	**91.9**	**91.5**	**94.8**	**94.9**	**96.8**	**96.0**
Slaughtering and meat packing	80.5	78.6	79.6	82.1	84.2	83.5	84.1	87.3
Confectionery	93.0	85.1	96.1	93.2	100.1	91.8	105.4	99.5
Ice cream	81.2	96.9	86.6	80.3	87.7	105.4	93.9	87.7
Flour	89.3	90.0	91.4	90.7	93.5	95.6	100.5	94.0
Baking	103.6	104.2	104.7	103.2	109.1	109.7	109.9	108.7
Sugar refining, cane	90.1	87.4	90.1	89.8	90.9	92.2	97.2	92.6
Textiles and their products	**87.1**	**80.6**	**83.1**	**83.7**	**86.3**	**80.1**	**85.5**	**82.9**
Cotton goods	87.9	75.1	78.2	80.6	87.0	70.0	75.4	78.0
Hosiery and knit goods	99.5	90.6	92.3	93.6	116.3	103.1	112.2	110.7
Silk goods	96.1	95.2	98.3	97.1	100.9	105.6	111.1	103.9
Woolen and worsted goods	80.7	73.2	77.4	80.1	79.6	70.4	78.2	78.8
Carpets and rugs	95.4	90.7	96.7	98.5	92.1	84.7	90.8	92.3
Dyeing and finishing textiles	101.0	94.6	97.3	99.8	104.3	97.4	104.1	106.8
Clothing, men's	79.5	78.5	77.4	75.0	67.0	70.7	69.1	63.3
Shirts and collars	83.3	75.4	78.6	79.1	85.8	73.3	81.1	80.6
Clothing, women's	81.3	82.6	86.4	84.1	81.8	85.0	94.7	82.7
Millinery and lace goods	67.0	67.6	65.6	64.2	68.1	73.1	67.9	65.0
Iron and steel and their products	**80.6**	**85.7**	**86.4**	**87.2**	**81.6**	**90.3**	**95.2**	**95.0**
Iron and steel	86.0	89.3	89.6	91.1	86.1	93.5	99.4	100.3
Cast-iron pipe	86.8	86.0	84.5	80.5	79.5	79.2	82.2	79.2
Structural ironwork	91.4	97.4	97.9	97.7	97.1	107.4	112.6	111.1
Foundry and machine-shop products	75.1	81.7	82.3	82.9	74.7	84.6	88.4	87.4
Hardware	78.9	79.6	79.5	80.7	84.7	86.4	90.8	92.5
Machine tools	90.3	108.8	112.3	116.4	99.8	128.2	136.7	142.0
Steam fittings and steam and hot-water heating apparatus	85.5	80.3	80.3	76.9	83.6	84.0	84.5	79.7
Stoves	80.2	79.3	83.2	81.9	80.2	78.4	88.0	82.7
Lumber and its products	**83.0**	**81.8**	**81.9**	**81.7**	**92.1**	**89.6**	**91.4**	**89.9**
Lumber, sawmills	78.0	77.7	77.2	76.6	87.7	85.7	86.2	84.2
Lumber, millwork	84.0	85.9	83.3	84.1	88.9	91.0	91.3	89.2
Furniture	99.7	93.7	97.3	98.0	109.5	102.3	109.7	110.0
Leather and its products	**84.6**	**85.9**	**84.6**	**80.0**	**75.3**	**84.0**	**81.3**	**69.0**
Leather	88.9	86.9	85.7	82.9	88.7	86.8	87.1	82.1
Boots and shoes	83.2	85.6	84.2	79.0	70.0	82.9	79.0	63.7
Paper and printing	**105.1**	**102.1**	**103.5**	**104.8**	**114.7**	**112.5**	**115.1**	**115.3**
Paper and pulp	93.1	90.5	90.5	91.3	99.0	96.2	99.2	99.4
Paper boxes	103.8	95.5	100.5	102.5	117.5	110.4	118.1	121.8
Printing, book and job	105.5	101.7	102.3	103.6	116.7	115.6	115.4	113.2
Printing, newspapers	116.8	116.7	118.5	120.1	126.7	125.6	128.8	130.4
Chemicals and allied products	**91.7**	**93.2**	**93.4**	**92.9**	**96.9**	**98.3**	**100.3**	**99.0**
Chemicals	97.2	95.4	97.2	97.9	108.6	104.7	111.3	110.5
Fertilizers	89.4	98.2	97.1	92.4	96.8	109.6	104.9	99.1
Petroleum	85.2	87.9	86.7	86.4	84.2	88.2	87.1	86.5
Stone, clay, and glass products	**93.0**	**93.1**	**91.3**	**88.9**	**98.6**	**97.7**	**99.6**	**96.4**
Cement	86.7	83.6	82.2	79.4	91.0	88.3	88.3	82.0
Brick, tile, and terra cotta	90.1	89.8	87.0	84.9	92.5	91.4	90.4	86.8
Pottery	101.0	101.8	104.0	103.2	111.8	105.4	110.1	107.9
Glass	95.2	96.5	94.0	91.0	102.3	104.3	108.3	106.4
Metal products, other than iron and steel	**86.5**	**91.8**	**93.4**	**95.4**	**85.1**	**96.7**	**103.0**	**104.6**
Stamped and enameled ware	83.5	84.6	85.1	86.2	82.8	81.2	85.5	86.0
Brass, bronze, and copper products	87.9	95.0	97.1	99.5	86.0	102.4	109.5	111.4
Tobacco products	**89.1**	**84.7**	**86.7**	**86.6**	**91.3**	**86.1**	**88.2**	**87.1**
Chewing and smoking tobacco and snuff	94.9	87.9	88.0	88.9	94.5	93.5	95.5	88.6
Cigars and cigarettes	88.3	84.3	86.5	86.3	90.9	85.2	87.4	86.9

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—NOVEMBER, 1927 AND SEPTEMBER, OCTOBER, AND NOVEMBER, 1928—Continued

Industry	Employment				Pay-roll totals			
	1927	1928			1927	1928		
	November	September	October	November	November	September	October	November
Vehicles for land transportation	**76.8**	**92.6**	**91.5**	**87.1**	**79.0**	**94.1**	**98.5**	**90.5**
Automobiles	87.2	133.7	131.9	120.0	86.3	136.4	141.8	121.1
Carriages and wagons	73.5	81.8	75.7	74.1	75.3	88.3	83.1	80.0
Car building and repairing, electric-railroad	88.9	82.3	82.2	81.8	92.1	82.9	85.8	84.8
Car building and repairing, steam-railroad	69.5	67.4	66.8	66.8	73.7	67.8	71.9	71.5
Miscellaneous industries	**89.7**	**88.8**	**90.2**	**91.0**	**92.4**	**93.5**	**95.1**	**93.6**
Agricultural implements	88.6	102.2	107.6	110.2	99.7	117.0	127.2	129.2
Electrical machinery, apparatus, and supplies	94.4	96.7	98.6	99.3	96.0	101.3	106.6	104.7
Pianos and organs	88.4	72.8	74.1	76.6	98.1	80.4	84.0	87.6
Rubber boots and shoes	94.4	85.2	87.7	89.1	109.6	94.1	95.3	97.3
Automobile tires	97.3	120.6	119.2	114.1	94.1	131.5	126.7	115.8
Shipbuilding	83.9	72.2	73.5	76.1	88.1	76.6	77.4	77.9

Table 7 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to November, 1928.

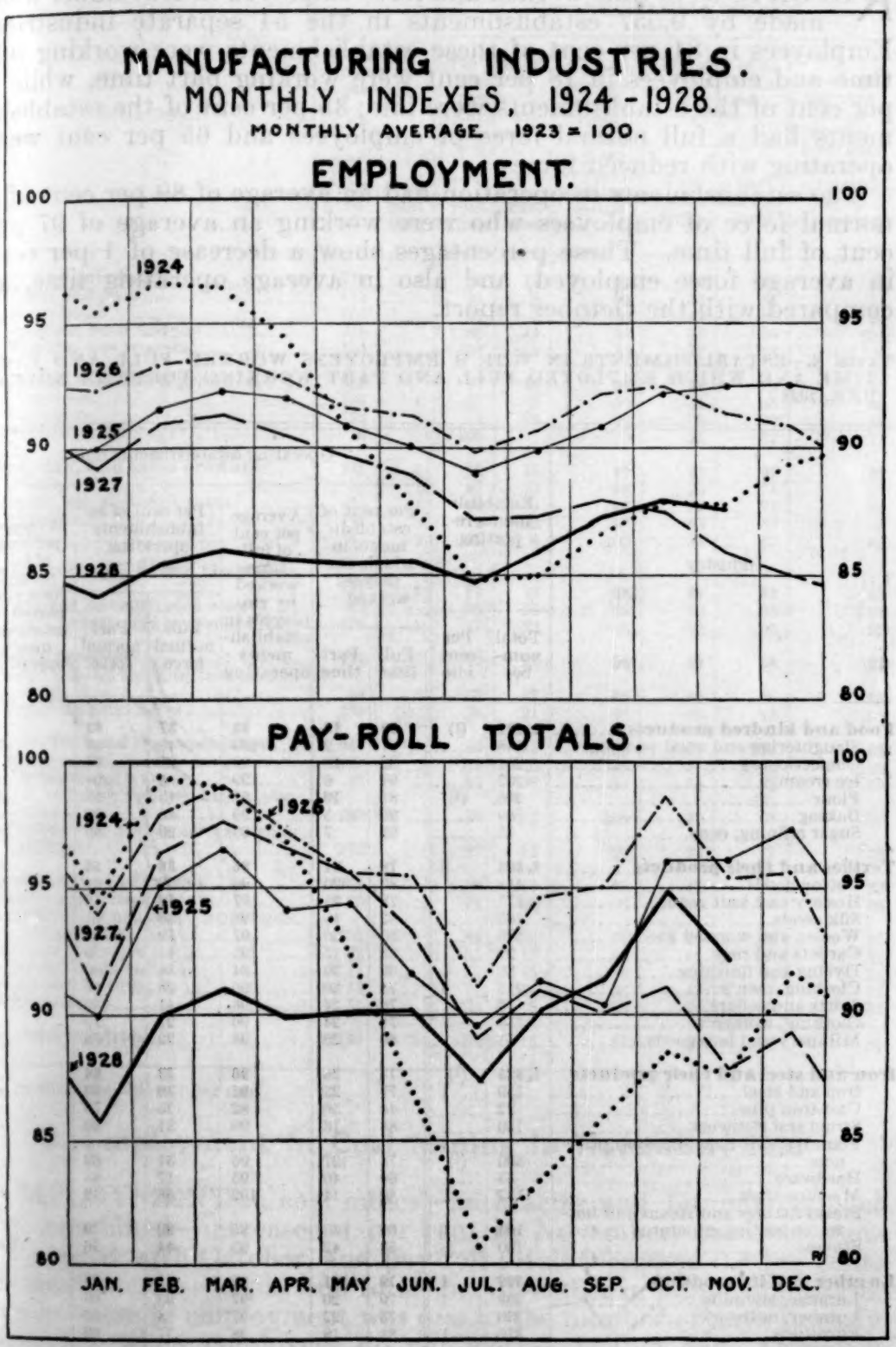
Following Table 7 is a chart which represents the 54 industries combined and shows, by months, the course of pay-roll totals as well as the course of employment. It includes the years 1924, 1925, and 1926, as well as 1927, and January, February, March, April, May, June, July, August, September, October, and November, 1928.

TABLE 7.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO NOVEMBER, 1928

[Monthly average, 1923=100]

Month	Employment						Pay-roll totals					
	1923	1924	1925	1926	1927	1928	1923	1924	1925	1926	1927	1928
January	98.0	95.4	90.0	92.3	89.4	84.2	91.8	94.5	90.0	93.9	90.9	85.8
February	99.6	96.6	91.6	93.3	91.0	85.5	95.2	99.4	95.1	97.9	96.4	90.0
March	101.8	96.4	92.3	93.7	91.4	86.1	100.3	99.0	96.6	99.1	97.7	91.2
April	101.8	94.5	92.1	92.8	90.6	85.7	101.3	96.9	94.2	97.2	96.6	89.9
May	101.8	90.8	90.9	91.7	89.7	85.5	104.8	92.4	94.4	95.6	95.6	90.1
June	101.9	87.9	90.1	91.3	89.1	85.6	104.7	87.0	91.7	95.5	93.3	90.2
July	100.4	84.8	89.3	89.8	87.3	84.7	99.9	80.8	89.6	91.2	89.1	87.4
August	99.7	85.0	89.9	90.7	87.4	86.0	99.3	83.5	91.4	94.6	91.0	90.2
September	99.8	86.7	90.9	92.2	88.0	87.3	100.0	86.0	90.4	95.1	90.1	91.4
October	99.3	87.9	92.3	92.5	87.6	88.1	102.3	88.5	96.2	98.6	91.2	94.8
November	98.7	87.8	92.5	91.4	85.9	87.7	101.0	87.6	96.2	95.4	87.8	92.1
December	96.9	89.4	92.6	90.9	85.1	.....	98.9	91.7	97.3	95.6	89.3	.....
Average	**100.0**	**90.3**	**91.2**	**91.9**	**88.5**	[1] **86.0**	**100.0**	**90.6**	**93.6**	**95.8**	**92.4**	[1] **90.3**

[1] Average for 11 months.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES, 1924-1928.
MONTHLY AVERAGE 1923 = 100.
EMPLOYMENT.
100
95
90
85
80
1924
1926
1925
1927
1928
PAY-ROLL TOTALS.
JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.

Proportion of Time Worked and Force Employed in Selected Manufacturing Industries in November, 1928

REPORTS as to time worked and force employed in November were made by 9,557 establishments in the 54 separate industries. Employees in 81 per cent of these establishments were working full time and employees in 18 per cent were working part time, while 1 per cent of the establishments were idle; 35 per cent of the establishments had a full normal force of employees and 65 per cent were operating with reduced forces.

The establishments in operation had an average of 89 per cent of a normal force of employees who were working an average of 97 per cent of full time. These percentages show a decrease of 1 per cent in average force employed, and also in average operating time, as compared with the October report.

TABLE 8.—ESTABLISHMENTS IN WHICH EMPLOYEES WORKED FULL AND PART TIME AND WHICH EMPLOYED FULL AND PART WORKING FORCE IN NOVEMBER, 1928

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	**1,491**	(1)	**90**	**10**	**99**	**37**	**63**	**90**
Slaughtering and meat packing	148	------	91	9	100	49	51	91
Confectionery	261	(1)	82	18	98	25	74	86
Ice cream	202	------	94	6	99	6	94	66
Flour	296	(1)	81	19	97	43	57	94
Baking	569	------	95	5	99	48	52	96
Sugar refining, cane	15	------	93	7	99	20	80	87
Textiles and their products	**1,503**	**1**	**78**	**21**	**96**	**36**	**63**	**89**
Cotton goods	418	------	80	20	96	38	62	87
Hosiery and knit goods	177	1	78	21	97	42	56	94
Silk goods	165	------	82	18	98	39	61	92
Woolen and worsted goods	176	------	80	20	97	39	61	87
Carpets and rugs	27	------	85	15	95	41	59	99
Dyeing and finishing	86	1	69	30	94	38	60	90
Clothing, men's	215	6	74	20	96	28	67	85
Shirts and collars	70	------	76	24	96	41	59	94
Clothing, women's	118	1	75	24	96	27	72	86
Millinery and lace goods	51	------	80	20	98	22	78	83
Iron and steel and their products	**1,625**	(1)	**73**	**26**	**96**	**33**	**66**	**88**
Iron and steel	159	1	77	22	95	30	69	88
Cast-iron pipe	32	------	44	56	82	25	75	81
Structural ironwork	150	------	84	16	99	31	69	89
Foundry and machine-shop products	890	(1)	73	27	96	31	69	86
Hardware	53	------	60	40	93	17	83	83
Machine tools	137	------	86	14	102	58	42	109
Steam fittings and steam and hot-water heating apparatus	104	1	66	33	95	29	70	79
Stoves	100	------	58	42	93	44	56	96
Lumber and its products	**999**	**1**	**79**	**21**	**97**	**31**	**68**	**86**
Lumber, sawmills	399	1	79	20	97	32	66	85
Lumber, millwork	230	------	73	27	97	18	82	76
Furniture	370	1	81	18	98	37	62	94
Leather and its products	**316**	(1)	**75**	**24**	**94**	**29**	**71**	**84**
Leather	113	------	88	12	98	26	74	78
Boots and shoes	203	(1)	68	32	92	31	69	86

[1] Less than one-half of 1 per cent.

TABLE 8.—ESTABLISHMENTS IN WHICH EMPLOYEES WORKED FULL AND PART TIME AND WHICH EMPLOYED FULL AND PART WORKING FORCE IN NOVEMBER, 1928—Continued

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Paper and printing	**770**	------	**90**	**10**	**99**	**48**	**52**	**98**
Paper and pulp	172	------	91	9	99	36	64	94
Paper boxes	166	------	91	9	99	43	57	94
Printing, book and job	278	------	86	14	98	44	56	101
Printing, newspapers	154	------	97	3	99	72	28	102
Chemicals and allied products	**309**	(1)	**82**	**18**	**99**	**22**	**78**	**77**
Chemicals	104	1	91	8	99	44	55	98
Fertilizers	166	------	72	28	98	8	92	53
Petroleum refining	39	------	100	------	100	23	77	76
Stone, clay, and glass products	**732**	**4**	**81**	**15**	**97**	**28**	**67**	**86**
Cement	86	1	87	12	98	28	71	81
Brick, tile, and terra cotta	435	7	80	14	97	22	71	80
Pottery	124	------	75	25	96	48	52	93
Glass	87	2	92	6	100	31	67	86
Metal products, other than iron and steel	**191**	**1**	**81**	**18**	**98**	**38**	**62**	**93**
Stamped and enameled ware	62	------	90	10	98	40	60	91
Brass, bronze, and copper products	129	1	77	22	98	36	63	95
Tobacco products	**228**	(1)	**77**	**23**	**96**	**50**	**50**	**97**
Chewing and smoking tobacco and snuff	24	------	63	38	95	42	58	88
Cigars and cigarettes	204	(1)	78	21	96	50	49	98
Vehicles for land transportation	**1,024**	(1)	**85**	**15**	**98**	**29**	**71**	**93**
Automobiles	183	------	84	16	98	47	54	100
Carriages and wagons	48	2	65	33	94	15	83	69
Car building and repairing, electric-railroad	283	------	86	14	100	32	68	86
Car building and repairing, steam-railroad	510	------	87	13	99	23	77	78
Miscellaneous industries	**389**	(1)	**82**	**18**	**98**	**42**	**58**	**93**
Agricultural implements	70	------	74	26	96	36	64	98
Electrical machinery, apparatus, and supplies	131	1	85	14	99	49	50	98
Pianos and organs	62	------	85	15	99	45	55	83
Rubber boots and shoes	11	------	55	45	95	36	64	91
Automobile tires	42	------	74	26	93	43	57	98
Shipbuilding	53	------	92	8	99	28	72	67
All industries	**9,557**	**1**	**81**	**18**	**97**	**35**	**65**	**89**

[1] Less than one-half of 1 per cent.

2. Employment in Coal Mining in November, 1928

EMPLOYMENT in coal mines—anthracite and bituminous coal combined—increased 4 per cent in November, 1928, as compared with October, and pay-roll totals increased 0.4 per cent. The small increase in pay-roll totals in November in proportion to the large increase in employment was due to the number of days in early November when employees do not work—election day, Armistice Day, and days of church celebration.

The 623 mines for which reports were received had 158,319 employees in November, with total pay rolls in one week of $4,393,472.

Anthracite

EMPLOYMENT in anthracite mines alone was 1.4 per cent greater in November, 1928, than in October, and pay-roll totals were 6.2 per cent smaller. Returns were made by 57 establishments having, in November, 39,321 employees as compared with 38,782 in October, and pay-roll totals of $1,247,513, as compared with $1,330,195 in October. All of the anthracite mines reported are in Pennsylvania.

Bituminous Coal

EMPLOYMENT in bituminous coal mines increased 4.8 per cent in November, 1928, as compared with October, and pay-roll totals were 3.3 per cent greater, as shown by reports from 566 establishments having in November 118,998 employees whose combined earnings in one week were $3,145,959.

Employment was considerably greater in each of 7 of the 8 geographic divisions from which reports were received. The increase ranged from 16.8 per cent in the East North Central division to 0.9 per cent in the Mountain division, there was a decrease in employment of 1.5 per cent in the Pacific division.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **BITUMINOUS COAL** MINES DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928

Geographic division [1]	Mines	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
New England							
Middle Atlantic	146	37,872	38,328	+1.2	$1,064,307	$1,060,849	−0.3
East North Central	109	16,744	19,558	+16.8	452,356	536,150	+18.5
West North Central	29	3,316	3,510	+5.9	91,684	88,800	−3.1
South Atlantic	126	23,444	24,107	+2.8	614,070	626,310	+2.0
East South Central	100	23,403	24,651	+5.3	523,001	541,919	+3.6
West South Central	11	837	911	+8.8	23,471	23,529	+0.2
Mountain	37	6,400	6,458	+0.9	218,211	221,554	+1.5
Pacific	8	1,498	1,475	−1.5	57,887	46,848	−19.1
All divisions	**566**	**113,514**	**118,998**	**+4.8**	**3,044,987**	**3,145,959**	**+3.3**

[1] See footnotes 3 to 11, p. 144.

3. Employment in Metalliferous Mining in November, 1928

EMPLOYMENT in metalliferous mines was 1.3 per cent greater in November, 1928, than in October, and pay-roll totals were 0.9 per cent greater, as shown by reports from 123 establishments having, in November, 30,316 employees whose combined earnings in one week were $911,603.

This is the first monthly comparison of employment in metalliferous mines published by the Bureau of Labor Statistics. The details for each geographic division are shown in the table following.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **METALLIFEROUS** MINES DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928

Geographic division [1]	Mines	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
New England							
Middle Atlantic							
East North Central	12	6,343	6,401	+0.9	$178,934	$173,479	−3.0
West North Central	17	3,223	3,176	−1.5	103,170	101,041	−2.1
South Atlantic							
East South Central	4	1,332	1,471	+10.4	25,151	30,000	+19.3
West South Central	28	2,057	2,133	+3.7	51,183	54,516	+6.5
Mountain	57	15,951	16,060	+0.7	510,921	519,556	+1.7
Pacific	5	1,033	1,075	+4.1	33,764	33,011	−2.2
All divisions	**123**	**29,939**	**30,316**	**+1.3**	**903,123**	**911,603**	**+0.9**

[1] See footnotes 3 to 11, p. 144.

4. Employment in Public Utilities in November, 1928

EMPLOYMENT in public utilities was little changed in November, 1928, as compared with October, the total difference being a decrease of one-tenth of 1 per cent only; pay-roll totals fell off 1.2 per cent, the larger decrease being due, as previously noted, to the holidays in early November.

These changes are based upon returns made by 5,259 establishments, including electric railway, electric power and light, gas, water, telephone, and telegraph companies. These establishments in November had 471,084 employees whose combined earnings in one week were $13,886,101.

The details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **PUBLIC UTILITIES** ESTABLISHMENTS DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928

Geographic division	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
New England	265	30,977	30,323	−2.1	$1,023,366	$989,558	−3.3
Middle Atlantic	903	117,107	116,760	−0.3	3,549,152	3,524,472	−0.7
East North Central	937	147,990	149,143	+0.8	4,606,268	4,614,253	+0.2
West North Central	956	48,227	48,139	−0.2	1,294,956	1,264,034	−2.4
South Atlantic	355	40,851	40,307	−1.3	1,109,337	1,094,696	−1.3
East South Central	102	4,305	4,267	−0.9	108,343	109,279	+0.9
West South Central	227	11,078	11,086	+0.1	291,226	283,144	−2.8
Mountain	1,262	45,837	45,998	+0.4	1,279,206	1,232,110	−3.7
Pacific	252	25,385	25,061	−1.3	789,597	774,555	−1.9
All divisions	**5,259**	**471,757**	**471,084**	**−0.1**	**14,051,451**	**13,886,101**	**−1.2**

[1] See footnotes 3 to 11, p. 144.

5. Employment in Wholesale and Retail Trade in November, 1928

EMPLOYMENT in 2,727 establishments—wholesale and retail trade combined—increased 4.4 per cent in November, 1928, as compared with October, and pay-roll totals increased 2.7 per cent. These establishments, in November, had 180,134 employees whose combined earnings in one week were $4,447,600.

Wholesale Trade

EMPLOYMENT in wholesale trade in November, 1928, decreased 0.9 per cent as compared with October, and pay-roll totals decreased 2 per cent, as shown by returns from 1,064 establishments having in November 35,362 employees whose combined earnings in one week were $1,023,717.

The details for each geographic division are shown in the table following.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **WHOLESALE TRADE** ESTABLISHMENTS DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
New England	51	1,440	1,409	−2.2	$41,074	$41,693	+1.5
Middle Atlantic	176	7,427	7,478	+0.7	224,206	228,329	+1.8
East North Central	183	7,581	7,287	−3.9	221,411	210,970	−4.7
West North Central	88	6,993	6,987	−0.1	193,825	187,502	−3.3
South Atlantic	112	2,572	2,586	+0.5	76,338	73,926	−3.2
East South Central	217	2,015	1,986	−1.4	53,639	53,925	+0.5
West South Central	78	3,242	3,200	−1.3	96,594	92,197	−4.6
Mountain	17	351	353	+0.6	13,323	12,774	−4.1
Pacific	142	4,054	4,076	+0.5	124,406	122,401	−1.6
All divisions	**1,064**	**35,675**	**35,362**	**−0.9**	**1,044,816**	**1,023,717**	**−2.0**

[1] See footnotes 3 to 11 p. 144.

Retail Trade

EMPLOYMENT in retail trade increased 5.8 per cent in November, 1928, as compared with October, and pay-roll totals were 4.1 per cent greater, as shown by reports from 1,663 establishments having, in November, 144,772 employees whose combined earnings in one week were $3,423,883.

The increase in employment in November is in accordance with expectations owing to the approaching holiday season. The increases in the nine geographic divisions ranged from 11.9 in the New England division to 2.6 in the West North Central division.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **RETAIL TRADE** ESTABLISHMENTS DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
New England	21	8,592	9,611	+11.9	$210,009	$219,877	+4.7
Middle Atlantic	137	28,714	31,119	+8.4	712,761	783,150	+9.9
East North Central	150	41,618	43,687	+5.0	1,135,858	1,138,530	+0.2
West North Central	61	7,176	7,360	+2.6	149,834	153,235	+2.3
South Atlantic	493	14,458	15,069	+4.2	289,220	301,410	+4.2
East South Central	190	4,301	4,598	+6.9	88,205	86,734	−1.7
West South Central	62	5,797	6,108	+5.4	109,389	111,710	+2.1
Mountain	30	1,769	1,857	+5.0	33,425	35,922	+7.5
Pacific	519	24,438	25,363	+3.8	559,042	593,315	+6.1
All divisions	**1,663**	**136,863**	**144,772**	**+5.8**	**3,287,743**	**3,423,883**	**+4.1**

[1] See footnotes 3 to 11 p. 144.

6. Employment in Hotels in November, 1928

EMPLOYMENT and pay-roll totals in hotels decreased 1.1 per cent each in November, 1928, as compared with October.

These percentages are based upon reports from 315 hotels, having in November 55,201 employees, whose combined earnings in one week were $957,099.

This is the first monthly comparison of employment in hotels published by the Bureau of Labor Statistics. Reports for the two months were received from all but three States, and in the next comparison—December with November—every State will be represented and the volume of the report very largely increased.

Per capita earnings obtained by dividing the total number of employees into the total amount of pay roll should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of board or room furnished employees, and of course no estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities, but among hotels in one locality, and among employees in one hotel. Some employees are furnished board and room, others are given board only for one, two, or three meals while the division of tips is made in many ways.

The significance of employment reports can not be established with certainty from a comparison of two months only, but there is reason for believing that the decrease shown in hotels in November arises from the fact that while some of the summer-season hotels were still holding a few of their employees in October, but had dropped them in November, the winter-season hotels had not yet taken on sufficient employees in November to overcome the decrease.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **HOTELS** DURING **ONE WEEK** EACH IN OCTOBER AND NOVEMBER, 1928

Geographic division [1]	Hotels	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		October, 1928	November, 1928		October, 1928	November, 1928	
New England	20	4,737	4,661	−1.6	77,642	76,595	−1.3
Middle Atlantic	66	17,733	17,570	−0.9	332,082	327,149	−1.5
East North Central	40	8,137	8,173	+0.4	144,421	140,607	−2.6
West North Central	48	5,736	5,713	−0.4	85,636	86,040	+0.5
South Atlantic	29	3,998	4,166	+4.2	60,086	62,066	+3.3
East South Central	17	3,360	3,376	+0.5	45,744	47,338	+3.5
West South Central	20	2,239	2,186	−2.4	31,607	31,799	+0.6
Mountain	16	2,168	1,781	−17.9	37,582	32,191	−14.3
Pacific	59	7,713	7,575	−2.0	152,784	153,314	+0.3
All divisions	**315**	**55,821**	**55,201**	**−1.1**	**967,584**	**957,099**	**−1.1**

[1] See footnotes 3 to 11, p. 144.

Employment on Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to October, 1928, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1923 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES—JANUARY, 1923, TO OCTOBER, 1928

[Monthly average, 1923=100]

Month	1923	1924	1925	1926	1927	1928
January	94.6	93.1	91.9	92.1	91.8	85.8
February	94.8	93.2	91.7	92.3	91.6	85.5
March	96.6	93.6	91.5	92.9	92.1	86.4
April	98.0	95.0	92.8	95.0	93.6	88.1
May	100.9	95.3	94.0	96.3	95.5	90.8
June	102.9	94.2	94.8	97.6	97.0	92.2
July	104.0	94.3	95.5	98.9	97.1	91.9
August	105.1	95.1	95.8	98.7	95.6	92.0
September	103.6	95.8	96.0	98.8	95.2	91.6
October	103.1	96.9	96.8	99.4	95.0	91.6
November	101.1	95.1	95.2	97.3	92.0	.....
December	95.5	92.3	93.3	94.4	88.3	.....
Average	**100.0**	**94.5**	**94.1**	**96.1**	**93.7**	[1] **89.6**

[1] Average for 10 months.

Table 2 shows the total number of employees on the 15th day each of October, 1928, September, 1928, and October, 1927, and the payroll totals for each of the entire months considered, by principal occupational groups and various important occupations.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—OCTOBER, 1927, AND SEPTEMBER AND OCTOBER, 1928

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	October, 1927	September, 1928	October, 1928	October, 1927	September, 1928	October, 1928
Professional, clerical, and general	**270,337**	**271,510**	**271,639**	**$40,103,740**	**$38,716,280**	**$40,050,604**
Clerks	162,102	155,676	155,876	22,114,927	20,971,704	21,968,354
Stenographers and typists	25,026	24,588	24,617	3,202,968	3,136,328	3,238,176
Maintenance of way and structures	**444,943**	**438,817**	**428,802**	**41,668,794**	**39,531,677**	**41,725,293**
Laborers, extra gang and work train	76,682	74,849	69,543	6,044,881	5,702,790	5,763,648
Laborers, track and roadway section	230,553	227,883	222,863	17,141,946	15,982,452	17,171,642
Maintenance of equipment and stores	**482,368**	**456,192**	**459,512**	**65,374,505**	**58,750,754**	**64,378,254**
Carmen	104,052	100,056	101,313	16,052,270	14,527,895	16,206,075
Machinists	58,207	54,902	55,255	9,432,834	8,393,924	9,332,469
Skilled trades helpers	106,583	100,131	100,844	12,264,930	10,865,291	12,076,028
Laborers (shops, engine houses, power plants, and stores)	40,409	37,352	37,700	3,958,265	3,492,359	3,704,820
Common laborers (shops, engine houses, power plants, and stores)	54,579	51,981	52,450	4,575,148	4,044,994	4,523,663

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—OCTOBER, 1927, AND SEPTEMBER AND OCTOBER, 1928—Continued

Occupation	Number of employees at middle of month			Total earnings		
	October, 1927	September, 1928	October, 1928	October, 1927	September, 1928	October, 1928
Transportation, other than train, engine, and yard	**206, 841**	**200, 432**	**201, 641**	**26, 134, 844**	**24, 897, 059**	**26, 111, 229**
Station agents	30, 271	29, 779	29, 729	4, 810, 645	4, 664, 403	4, 858, 529
Telegraphers, telephoners, and towermen	24, 420	23, 461	23, 472	3, 830, 830	3, 578, 341	3, 722, 700
Truckers (stations, warehouses, and platforms)	38, 455	35, 424	36, 920	3, 753, 790	3, 346, 383	3, 752, 076
Crossing and bridge flagmen and gatemen	21, 753	21, 132	20, 995	1, 677, 708	1, 627, 078	1, 626, 232
Transportation (yard masters, switch tenders, and hostlers)	**23, 089**	**22, 072**	**22, 100**	**4, 529, 309**	**4, 318, 821**	**4, 429, 695**
Transportation, train and engine	**329, 951**	**316, 967**	**323, 902**	**70, 035, 165**	**65, 603, 565**	**71, 825, 123**
Road conductors	37, 531	36, 260	36, 661	9, 342, 127	8, 699, 119	9, 332, 925
Road brakemen and flagmen	75, 551	72, 081	73, 157	13, 955, 596	12, 737, 865	13, 845, 762
Yard brakemen and yard helpers	54, 481	51, 994	53, 797	10, 306, 206	9, 420, 835	10, 638, 575
Road engineers and motormen	44, 654	42, 860	43, 595	12, 516, 603	12, 061, 045	13, 040, 992
Road firemen and helpers	45, 552	43, 522	44, 056	9, 392, 012	8, 905, 004	9, 629, 269
Total, all employees	**1, 766, 529**	**1, 705, 990**	**1, 707, 596**	**247, 846, 357**	**231, 818, 156**	**248, 520, 198**

Increased Employment in the Manufacture of Phonographs

THE Bureau of the Census in a recent report presents statistics for establishments engaged in the manufacture of phonographs and phonograph parts and accessories in the United States in 1925 and 1927. The statistics are of particular interest, as they show a very considerable increase in the number of employees engaged in this industry.

The number of establishments decreased from 68 in 1925 to 59 in 1927. The number of wage earners increased from 11,267 to 14,066, an increase of 24.8 per cent, and their wages or earnings increased from $14,144,955 to $19,985,140, or 41.3 per cent. Production in number of phonographs, including dictating machines and combination phonographs and radios, increased from 642,015 to 1,046,387, or 63 per cent, and in value increased from $22,613,909 to $49,242,170, or 117.8 per cent. The value of parts and accessories increased from $33,111,775 to $41,624,220, or 25.7 per cent. The production in number of records and blanks increased from 82,125,060 to 105,701,302, or 28.7 per cent, and in value increased from $26,790,847 to $31,781,443, or 18.6 per cent. The cost of materials increased from $24,847,094 to $37,262,711, or 50 per cent; aggregate value of all products increased from $61,057,147 to $94,815,873, or 55.3 per cent, and value added by manufacture increased from $36,210,053 to $57,553,162, or 58.9 per cent. The value of needles increased 9.6 per cent, of phonograph cabinets decreased 28.4 per cent, of other parts increased 166.3 per cent, of all other products decreased 34.5 per cent. The receipts for custom work and repairing increased 119.8 per cent. Horsepower increased from 41,343 to 43,927, or 6.3 per cent. Approximately 48 per cent of the 59 establishments in operation in 1927 were in three States—20 per cent in Illinois, 14 per cent each in New Jersey and New York. Plants were also in Connecticut, Indiana, Pennsylvania, Massachusetts, Wisconsin, Colorado, Iowa, Michigan, Ohio, Maryland, Minnesota, and Missouri.

Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices:

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State, and industry group	Per cent of change, September to October, 1928	
	Employment	Pay roll
Illinois		
Stone, clay, and glass products	−1.2	−0.5
Metals, machinery, and conveyances	+2.5	+3.0
Wood products	+1.2	+3.1
Furs and leather goods	−7.7	−11.8
Chemicals, oils, paints, etc	+.3	+3.2
Printing and paper goods	+.3	+3.3
Textiles	−4.1	+3.1
Clothing, millinery	−.8	−5.0
Food, beverages, and tobacco	−4.2	−1.5
All manufacturing industries	+.1	+1.2
Trade, wholesale and retail	+3.5	+4.8
Services	−1.9	+.6
Public utilities	−1.3	−12.7
Coal mining	+27.2	+14.6
Building and contracting	+1.3	+.8
All industries	+.7	−2.1
	October to November, 1928	
Iowa		
Food and kindred products	+1.2	
Textiles	−.3	
Iron and steel works	−.2	
Lumber products	−3.3	
Leather products	−8.7	
Paper products, printing and publishing	+2.2	
Patent medicines, chemicals, and compounds	+1.1	
Stone and clay products	−10.5	
Tobacco and cigars	.0	
Railway car shops	−.7	
Various industries	+.4	
All industries	−.6	
Maryland		
Food products	−1.3	−.3
Textiles	−3.8	−9.8
Iron and steel and their products	−2.2	−5.6
Lumber and its products	−.6	−1.8
Leather and its products	−11.3	−25.5
Rubber tires	−12.9	−5.6
Paper and printing	+1.0	+2.2
Chemicals and allied products	−4.2	−7.8
Stone, clay, and glass	+1.0	−6.0
Metal products, other than iron and steel	+2.4	+1.6
Tobacco products	+5.8	+1.7
Machinery (not including transportation equipment)	−3.3	−7.8
Musical instruments	+1.2	−2.1
Transportation equipment	−1.2	−.1
Car building and repairing	+.9	−1.1
Miscellaneous	+1.0	−.6
All industries	−2.7	−4.9

State, and industry group	Employment—index numbers (1919–1923=100)	
	October, 1928	November 1928
Massachusetts		
Boots and shoes	71.1	67.8
Bread and other bakery products	104.8	104.8
Cars and general shop construction and repairs, steam railroads	70.0	70.5
Clothing, men's and women's	94.0	93.5
Confectionery	101.8	92.7
Cotton goods	54.3	56.3
Dyeing and finishing textiles	101.6	104.4
Electrical machinery, apparatus, and supplies	111.2	109.4
Foundry and machine-shop products	67.0	68.0
Furniture	107.9	110.5
Hosiery and knit goods	69.6	70.7
Jewelry	108.0	113.9
Leather, tanned, curried, and finished	83.8	79.4
Paper and wood pulp	91.7	92.5
Printing and publishing	108.7	108.5
Rubber footwear	100.9	103.0
Rubber goods, tires, and tubes	89.5	89.2
Silk goods	104.3	105.3
Textile machinery and parts	47.7	47.5
Woolen and worsted goods	80.6	82.9
All industries	78.8	79.3
	Per cent of changes, September to October, 1928	
	Employment	Pay roll
New Jersey		
Food and kindred products	−20.8	−14.5
Textiles and their products	+2.5	+5.7
Iron and steel and their products	+1.7	+2.4
Lumber and its products	+6.3	+7.7
Leather and its products	−2.0	−.5
Tobacco products	+2.1	+13.0
Paper and printing	+1.0	+3.5
Chemicals and allied products	+.6	−.7
Stone, clay, and glass products	−.4	−2.5
Metal products other than iron and steel	+3.0	+9.0
Vehicles for land transportation	+2.1	+8.1
Miscellaneous	+1.2	+3.2
All industries	+.5	+2.7
New York		
Stone, clay, and glass	−.6	−1.1
Metals and machinery	+2.9	+3.8
Wood manufactures	+1.4	+1.5
Furs, leather, and rubber goods	+1.4	+2.4
Chemicals, oils, paints, etc	+1.2	+1.4
Paper	+.3	+2.4
Printing and paper goods	+3.3	+1.0
Textiles	+3.7	+4.1
Clothing and millinery	−.1	−.1
Food and tobacco	+.8	−.2
Water, light, and power	+2.1	+1.1
All industries	+2.0	+2.2

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, October to November, 1928	
	Employment	Pay roll
Oklahoma		
Cottonseed-oil mills	+0.7	+2.2
Food production:		
Bakeries	−1.3	+8.2
Confections	+1.3	+9.0
Creameries and dairies	+5.9	+36.5
Flour mills	+1.5	−3.4
Ice and ice cream	−16.4	−20.9
Meat and poultry	+2.4	−0.0
Lead and zinc:		
Mines and mills	−10.9	−17.7
Smelters	+1.6	+21.0
Metals and machinery:		
Auto repairs, etc	+.4	+14.7
Machine shops and foundries	+8.1	+74.2
Tank construction and erection	+.9	+1.6
Oil industry:		
Producing and gasoline manufacture	+1.5	+7.4
Refineries	+3.2	+.8
Printing: Job work	+7.1	−1.4
Public utilities:		
Steam railway shops	+3.3	−13.3
Street railways	+.9	−2.3
Water, light, and power	+21.0	−.8
Stone, clay, and glass:		
Brick and tile	+1.9	−3.7
Cement and plaster	−16.6	−17.2
Crushed stone	−2.2	−3.0
Glass manufacture	+.4	+8.8
Textiles and cleaning:		
Textile manufacture	−14.3	−1.7
Laundries, etc	+2.5	−1.7
Woodworking: Sawmills	+3.4	−11.3
All industries	0.0	−.4

State, and industry group	Index numbers (1923–1925=100)	
	October, 1928	November, 1928
	Employment	
Pennsylvania		
Metal products	89.0	89.2
Transportation equipment	66.3	[1] 66.5
Textile products	96.7	97.7
Foods and tobacco	102.1	99.8
Stone, clay, and glass products	82.4	81.9
Lumber products	85.4	80.2
Chemical products	98.0	97.7
Leather and rubber products	97.4	95.7
Paper and printing	94.4	94.1
All industries	89.6	89.5
	Pay roll	
Pennsylvania—Continued		
Metal products	97.6	95.2
Transportation equipment	66.3	[1] 65.1
Textile products	106.9	105.0
Foods and tobacco	104.0	100.9
Stone, clay, and glass products	86.9	83.5
Lumber products	91.7	90.6
Chemical products	106.2	104.8
Leather and rubber products	103.4	94.8
Paper and printing	108.7	109.3
All industries	95.6	93.2

State, and industry group	Per cent of change, September to October, 1928	
	Employment	Pay roll
Wisconsin		
Manual		
Logging	+.8	−6.1
Mining	−1.7	+3.5
Stone crushing and quarrying	−3.2	+1.6
Manufacturing:		
Stone and allied industries	−.3	−1.2
Metal	+.2	+2.8
Wood	+.1	+6.0
Rubber	+3.1	+5.8
Leather	−1.4	+3.7
Paper	+1.8	+3.8
Textiles	+2.8	+9.2
Foods	−7.0	−.7
Light and power	−2.0	+3.4
Printing and publishing	+3.5	+4.3
Laundering, cleaning, and dyeing	.0	+.9
Chemicals (including soap, glue, and explosives)	−7.2	−9.3
All manufacturing	−.1	+3.5
Construction:		
Building	−5.2	−2.7
Highway	−8.7	+2.2
Railroad	−6.4	−6.1
Marine dredging, sewer digging	+13.2	+8.0
Communication:		
Steam railways	−.7	+2.5
Electric railways	−2.0	−4.5
Express, telephone, and telegraph	+2.2	−2.3
Wholesale trade	+4.5	+6.5
Hotels and restaurants	−3.6	----------
Nonmanual		
Manufacturing, mines, and quarries	.0	+2.1
Construction	+.5	+1.2
Communication	−.2	+10.9
Wholesale trade	−2.6	−.1
Retail trade—sales force only	+5.8	+8.3
Miscellaneous professional services	−.5	+10.5
Hotels and restaurants	+.6	----------

[1] Preliminary figures.

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period

State, and industry group	Per cent of change, October, 1927, to October, 1928	
	Employment	Pay roll
California		
Stone, clay, and glass products	0.0	−3.4
Metals, machinery and conveyances	+8.5	+16.1
Wood manufactures	−5.3	−4.9
Leather and rubber goods	+26.9	+32.1
Chemicals, oils, paints, etc	+18.1	+23.6
Printing and paper goods	+.3	+.8
Textiles	−11.6	−6.2
Clothing, millinery, and laundering	+1.8	+2.4
Foods, beverages, and tobacco	+2.5	+3.3
Water, light, and power	−1.5	+6.0
Miscellaneous	−6.0	−5.9
All industries	+4.2	+8.2

State, and industry group	Employment—index numbers (1919–1923=100)	
	November, 1927	November, 1928
Massachusetts		
Boots and shoes	72.3	67.8
Bread and other bakery products	104.0	104.8
Cars and general shop construction and repairs, steam railroads	74.3	70.5
Clothing, men's and women's	99.1	93.5
Confectionery	109.7	92.7
Cotton goods	74.3	56.3
Dyeing and finishing textiles	102.6	104.4
Electrical machinery, apparatus and supplies	108.5	109.4
Foundry and machine-shop products	67.4	68.0
Furniture	112.7	110.5
Hosiery and knit goods	93.2	70.7
Jewelry	111.6	113.9
Leather, tanned, curried, and finished	91.2	79.4
Paper and wood pulp	91.0	92.5
Printing and publishing	105.4	108.5
Rubber footwear	107.8	103.0
Rubber goods, tires, and tubes	101.2	89.2
Silk goods	113.6	105.3
Textile machinery and parts	64.9	47.5
Woolen and worsted goods	88.5	82.9
All industries	86.2	79.3

State, and industry group	Per cent of change, October, 1927, to October, 1928	
	Employment	Pay roll
New York		
Stone, clay, and glass	−3.0	−3.2
Metals and machinery	+1.0	+5.1
Wood manufactures	−9.1	−10.2
Furs, leather, and rubber goods	−2.8	−2.2
Chemicals, oils, paints, etc	−4.1	−3.4
Paper	−2.2	−.6
Printing and paper goods	+.2	+1.0
Textiles	−3.8	−6.8
Clothing and millinery	−5.2	−4.0
Food and tobacco	−.8	−.6
Water, light, and power	−6.9	−8.7
All industries	−1.9	−.2

State, and industry group	November, 1927, to November, 1928	
	Employment	Pay roll
Oklahoma		
Cottonseed-oil mills	−11.6	−25.2
Food production:		
Bakeries	+17.4	+11.5
Confections	+30.0	−15.8
Creameries and dairies	−13.9	+9.3
Flour mills	+30.2	+34.1
Ice and ice cream	+52.6	+81.1
Meat and poultry	+5.2	+47.4
Lead and zinc:		
Mines and mills	−22.2	−27.3
Smelters	+5.3	+41.8
Metals and machinery:		
Auto repairs, etc	+225.8	+20.5
Machine shops and foundries	+24.3	+32.8
Tank construction and erection	+5.3	+19.9
Oil industry:		
Producing and gasoline manufacture	+24.9	+31.2
Refineries	+2.1	+13.5
Printing: Job work	+76.7	+105.5
Public utilities:		
Steam-railway shops	−9.7	−36.8
Street railways	+14.0	−10.6
Water, light, and power	+120.2	+141.7
Stone, clay, and glass:		
Brick and tile	−.9	−2.9
Cement and plaster	+17.6	−24.9
Crushed stone	−5.1	+62.1
Glass manufacture	+29.5	+38.6
Textiles and cleaning:		
Textile manufacture	+186.2	−43.2
Laundries, etc	+53.2	+58.9
Woodworking:	+25.3	+268.6
Sawmills		
Millwork, etc	+41.5	+64.5
All industries	+19.2	+27.7

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period—Continued

State, and industry group	Index numbers (1923-1925=100)	
	November, 1927	November, 1928
Pennsylvania		
Employment		
Metal products	81.5	89.2
Transportation equipment	83.3	[1] 66.5
Textile products	102.6	97.7
Foods and tobacco	97.3	99.8
Stone, clay, and glass products	92.0	81.9
Lumber products	84.4	80.2
Chemical products	95.0	97.7
Leather and rubber products	101.7	95.7
Paper and printing	95.9	94.1
All industries	89.2	89.5
Pay roll		
Metal products	78.8	95.2
Transportation equipment	83.8	[1] 65.1
Textile products	112.4	105.0
Foods and tobacco	98.6	100.9
Stone, clay, and glass products	90.8	83.5
Lumber products	82.7	90.6
Chemical products	104.1	104.8
Leather and rubber products	102.7	94.8
Paper and printing	106.5	109.3
All industries	89.9	93.2

State, and industry group	Per cent of change, October, 1927, to October, 1928	
	Employment	Pay roll
Wisconsin		
Manual		
Logging	−8.2	−15.1
Mining	−46.5	−44.1
Stone crushing and quarrying	−18.6	−30.6
Wisconsin—Continued		
Manual—Continued		
Manufacturing:		
Stone and allied industries	−8.4	−8.6
Metal	+13.3	+30.5
Wood	−1.8	−5.1
Rubber	+.7	+3.1
Leather	−1.8	−2.2
Paper	−1.3	+2.7
Textiles	−13.8	−15.9
Foods	−10.8	−5.9
Light and power	+9.4	+13.8
Printing and publishing	+6.3	+2.1
Laundering, cleaning, and dyeing	+1.3	−.5
Chemical (including soap, glue, and explosives)	−24.1	−22.5
All manufacturing	+2.1	+9.5
Construction:		
Building	−18.8	−14.9
Highway	−4.1	+1.3
Railroad	+4.9	+6.2
Marine dredging, sewer digging	−26.7	−20.2
Communication:		
Steam railways	−9.4	−1.0
Electric railways	−1.3	−4.9
Express, telephone, and telegraph	+14.6	+15.2
Wholesale trade	+21.8	+3.9
Hotels and restaurants	+2.2	----------
Nonmanual		
Manufacturing, mines, and quarries	+.3	+4.7
Construction	−6.3	−7.1
Communication	+4.0	+7.1
Wholesale trade	+7.9	+8.7
Retail trade—sales force only	−9.9	−3.0
Miscellaneous professional services	+4.8	+10.7
Hotels and restaurants	−12.9	----------

[1] Preliminary figures.

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices [1] received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food November 15, 1927, and October 15 and November 15, 1928, as well as the percentage changes in the year and in the month. For example, the retail price per dozen of strictly fresh eggs was 61.7 cents on November 15, 1927; 54.3 cents on October 15, 1928; and 59.3 cents on November 15, 1928. These figures show a decrease of 4 per cent in the year, and an increase of 9 per cent in the month.

The cost of various articles of food combined shows an increase of 0.6 per cent November 15, 1928, as compared with November 15, 1927, and an increase of 0.3 per cent November 15, 1928, as compared with October 15, 1928.

[1] In addition to monthly retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE NOVEMBER 15, 1928, COMPARED WITH OCTOBER 15, 1928, AND NOVEMBER 15, 1927

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Nov. 15, 1928, compared with—	
		Nov. 15, 1927	Oct. 15, 1928	Nov. 15, 1928	Nov. 15, 1927	Oct. 15, 1928
		Cents	*Cents*	*Cents*		
Sirloin steak	Pound	43.5	50.3	49.1	+13	−2
Round steak	do	37.8	44.6	43.4	+15	−3
Rib roast	do	31.9	36.8	36.3	+14	−1
Chuck roast	do	24.5	30.2	29.7	+21	−2
Plate beef	do	16.2	20.8	20.8	+28	0
Pork chops	do	36.3	37.6	35.7	−2	−5
Bacon	do	46.3	45.3	44.5	−4	−2
Ham	do	53.0	55.6	54.6	+3	−2
Lamb, leg of	do	37.6	38.8	38.0	+1	+2
Hens	do	35.6	37.9	38.0	+7	+0.3
Salmon, canned, red	do	34.8	32.6	32.3	−7	−1
Milk, fresh	Quart	14.2	14.2	14.3	+1	+1
Milk, evaporated	16-oz. can	11.5	11.3	11.4	−1	+1
Butter	Pound	56.4	57.5	58.3	+3	+1
Oleomargine (all butter substitutes)	do	27.9	27.6	27.6	−1	0
Cheese	do	38.6	38.8	38.5	−0.3	−1
Lard	do	19.5	19.5	19.2	−2	−2
Vegetable lard substitutes	do	25.1	24.9	24.8	−1	−0.4
Eggs, strictly fresh	Dozen	61.7	54.3	59.3	−4	+9
Eggs, storage	do	43.8	43.8	44.0	+0.4	+0.4
Bread	Pound	9.3	9.1	9.1	−2	0
Flour	do	5.4	5.2	5.1	−6	−2
Corn meal	do	5.2	5.3	5.3	+2	0
Rolled oats	do	9.0	8.9	8.9	−1	0
Corn flakes	8-oz package	9.7	9.5	9.5	−2	0
Wheat cereal	28-oz package	25.5	25.6	25.5	0	−0.4
Macaroni	Pound	20.0	19.7	19.7	−2	0
Rice	do	10.4	9.9	9.8	−6	−1
Beans, navy	do	9.5	12.5	12.5	+32	0
Potatoes	do	3.0	2.2	2.2	+27	0
Onions	do	4.8	6.1	6.5	+35	+7
Cabbage	do	3.7	4.3	4.3	+16	0
Beans, baked	No. 2 can	11.5	11.6	11.7	+2	+1
Corn, canned	do	15.7	15.9	15.9	+1	0
Peas, canned	do	16.6	16.7	16.7	+1	0
Tomatoes, canned	do	11.8	11.8	11.9	+1	+1
Sugar	Pound	7.2	6.9	6.8	−6	−1
Tea	do	77.5	77.5	77.4	−0.1	−0.1
Coffee	do	47.8	49.6	49.7	+4	+0.2
Prunes	do	14.1	13.8	14.0	−1	+1
Raisins	do	13.8	12.4	12.0	−13	−3
Bananas	Dozen	34.4	33.1	33.7	−2	+2
Oranges	do	53.2	64.2	56.5	+6	−12
Weighted food index					+0.6	+0.3

Table 2 shows for the United States average retail prices of specified food articles on November 15, 1913, and on November 15 of each year from 1922 to 1928, together with percentage changes in November of each of these specified years, compared with November, 1913. For example, the retail price per pound of hens was 20.6 cents in November, 1913; 33.9 cents in November, 1922; 33.7 cents in November, 1923; 34.5 cents in November, 1924; 35.8 cents in November, 1925; 37.1 cents in November, 1926; 35.6 cents in November, 1927; and 38 cents in November, 1928.

As compared with November, 1913, these figures show increases of 65 per cent in November, 1922; 64 per cent in November, 1923; 67 per cent in November, 1924; 74 per cent in November, 1925;

80 per cent in November, 1926; 73 per cent in November, 1927; and 84 per cent in November, 1928.

The cost of the various articles of food combined showed an increase of 50 per cent in November, 1928, as compared with November, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE NOVEMBER 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH NOVEMBER 15, 1913

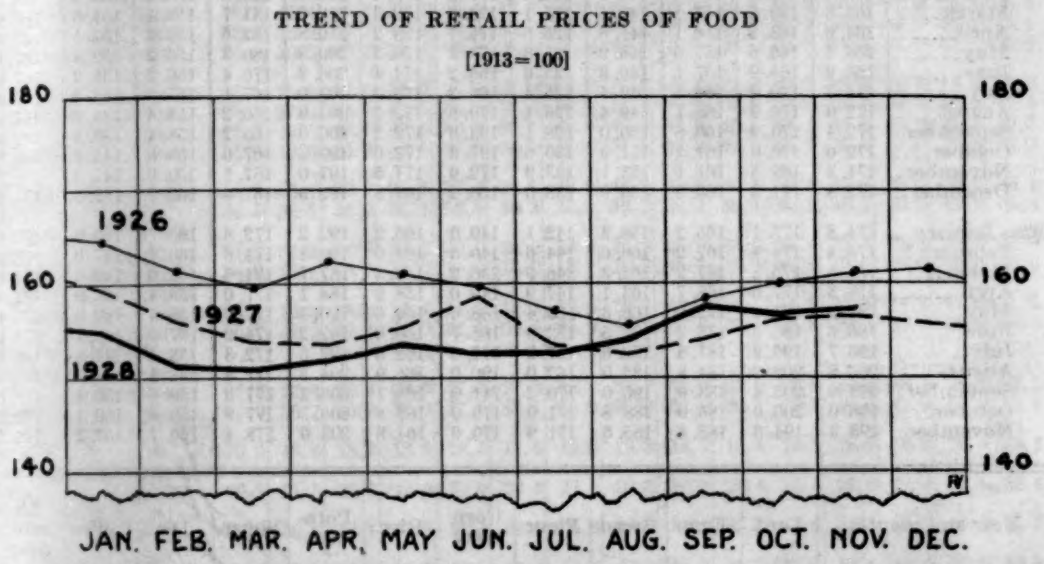
[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail price on Nov. 15—								Per cent of increase Nov. 15 of each specified year compared with Nov. 15, 1913						
	1913	1922	1923	1924	1925	1926	1927	1928	1922	1923	1924	1925	1926	1927	1928
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.							
Sirloin steak, pound	25.4	37.3	38.9	38.7	40.3	40.9	43.5	49.1	47	53	52	59	61	71	93
Round steak, do	22.8	32.0	33.1	32.9	34.4	35.5	37.8	43.4	40	45	44	51	56	66	90
Rib roast, do	19.8	27.5	28.3	28.2	29.5	30.2	31.9	36.3	39	43	42	49	53	61	83
Chuck roast, do	16.3	19.6	20.4	20.4	21.6	22.7	24.5	29.7	20	25	25	33	39	50	82
Plate beef, do	12.4	12.7	13.0	13.2	14.1	14.7	16.2	20.8	2	5	6	14	19	31	68
Pork chops, do	21.5	33.0	28.9	31.6	37.5	39.3	36.3	35.7	53	34	47	74	83	69	66
Bacon, do	27.2	40.9	38.5	40.1	49.2	51.0	46.3	44.5	50	42	47	81	88	70	64
Ham, do	26.9	46.3	45.5	47.0	53.5	58.4	53.0	54.6	72	69	75	99	117	97	103
Lamb, leg of, do	18.5	35.8	35.8	35.4	38.4	37.9	37.6	38.0	94	94	91	108	105	103	105
Hens, do	20.6	33.9	33.7	34.5	35.8	37.1	35.6	38.0	65	64	67	74	80	73	84
Salmon, canned, red, pound	-----	31.5	31.4	31.7	36.4	34.7	34.8	32.3	-----	-----	-----	-----	-----	-----	-----
Milk, fresh, quart	9.1	13.4	14.3	13.8	14.3	14.1	14.2	14.3	47	57	52	57	55	56	57
Milk, evaporated, 16-oz. can	-----	11.7	12.2	11.0	11.6	11.4	11.5	11.4	-----	-----	-----	-----	-----	-----	-----
Butter, pound	38.7	54.6	58.9	48.9	59.7	55.7	56.4	58.3	41	52	26	54	44	46	51
Oleomargarine (all butter substitutes), pound	-----	27.6	29.2	30.2	31.2	30.1	27.9	27.6	-----	-----	-----	-----	-----	-----	-----
Cheese, do	22.5	35.5	37.7	34.7	37.4	36.9	38.6	38.5	58	68	54	66	64	72	71
Lard, do	15.9	17.6	18.9	22.4	23.3	21.1	19.5	19.2	11	19	41	47	33	23	21
Vegetable lard substitute, pound	-----	23.2	23.7	25.5	25.8	25.6	25.1	24.8	-----	-----	-----	-----	-----	-----	-----
Eggs, strictly fresh, dozen	49.7	64.5	66.3	68.1	69.4	66.0	61.7	59.3	30	33	37	40	33	24	19
Eggs, storage, do	34.3	39.8	42.3	47.3	47.4	47.0	43.8	44.0	16	23	38	38	37	28	28
Bread, pound	5.6	8.7	8.7	8.9	9.4	9.4	9.3	9.1	55	55	59	68	68	66	63
Flour, do	3.3	4.8	4.6	5.4	6.0	5.7	5.4	5.1	45	39	64	82	73	64	55
Corn meal, do	3.1	3.9	4.4	5.1	5.3	5.1	5.2	5.3	26	42	65	71	65	68	71
Rolled oats, do	-----	8.8	8.8	9.1	9.2	9.1	9.0	8.9	-----	-----	-----	-----	-----	-----	-----
Corn flakes, 8-oz. package	-----	9.7	9.7	10.7	11.0	10.9	9.7	9.5	-----	-----	-----	-----	-----	-----	-----
Wheat cereal, 28-oz. package	-----	25.6	24.3	24.4	25.2	25.4	25.5	25.5	-----	-----	-----	-----	-----	-----	-----
Macaroni, pound	-----	19.9	19.7	19.6	20.5	20.1	20.0	19.7	-----	-----	-----	-----	-----	-----	-----
Rice, do	8.7	9.5	9.7	10.5	11.4	11.3	10.4	9.8	9	11	21	31	30	20	13
Beans, navy, do	-----	10.2	10.5	10.1	9.9	9.3	9.5	12.5	-----	-----	-----	-----	-----	-----	-----
Potatoes, do	1.8	2.1	2.6	2.2	5.2	4.0	3.0	2.2	17	44	22	189	122	67	22
Onions, do	-----	4.4	6.3	5.1	5.7	5.0	4.8	6.5	-----	-----	-----	-----	-----	-----	-----
Cabbage, do	-----	3.4	3.9	3.7	4.2	4.0	3.7	4.3	-----	-----	-----	-----	-----	-----	-----
Beans, baked, No. 2 can	-----	13.2	12.9	12.6	12.3	11.7	11.5	11.7	-----	-----	-----	-----	-----	-----	-----
Corn, canned, do	-----	15.2	15.6	16.6	17.1	16.3	15.7	15.9	-----	-----	-----	-----	-----	-----	-----
Peas, canned, do	-----	17.4	17.7	18.3	18.1	17.3	16.6	16.7	-----	-----	-----	-----	-----	-----	-----
Tomatoes, canned, No. 2 can	-----	12.8	12.9	13.6	12.9	12.1	11.8	11.9	-----	-----	-----	-----	-----	-----	-----
Sugar, granulated, pound	5.4	8.1	10.3	8.8	6.6	7.1	7.2	6.8	50	91	63	22	31	33	26
Tea, do	54.5	68.5	70.4	73.5	75.7	77.1	77.5	77.4	26	29	35	39	41	42	42
Coffee, do	29.8	36.5	37.8	49.0	51.2	50.8	47.8	49.7	22	27	64	72	70	60	67
Prunes, do	-----	20.2	18.0	17.2	17.2	16.5	14.1	14.0	-----	-----	-----	-----	-----	-----	-----
Raisins, do	-----	19.8	16.4	14.8	14.2	14.6	13.8	12.0	-----	-----	-----	-----	-----	-----	-----
Bananas, dozen	-----	36.8	38.3	37.3	34.7	34.9	34.4	33.7	-----	-----	-----	-----	-----	-----	-----
Oranges, do	-----	51.0	49.0	48.9	65.5	55.1	53.2	56.5	-----	-----	-----	-----	-----	-----	-----
All articles combined [1]	-----	-----	-----	-----	-----	-----	-----	-----	38.1	44.0	43.1	59.3	54.2	49.1	50.0

[1] Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Index Numbers of Retail Prices of Food in the United States

IN TABLE 3 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1927,[2] and by months for 1927, and for January through November, 1928. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1926 was 162.6, which means that the average money price for the year 1926 was 62.6 per cent higher than the average money price for the year 1913. As compared with the relative price, 159.8 in 1925,



the figures for 1926 show an increase of nearly three points, but an increase of 1.75 per cent in the year.

In the last column of Table 3 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100 are 156.8 for October, 1928, and 157.3 for November, 1928.

The curve shown in the chart on this page pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

[2] For index numbers of each month, January, 1913, to December, 1926, see Bulletin No. 396, pp. 44 to 61; Bulletin No. 418, pp. 38 to 51; and Bulletin No. 445, pp. 36 to 49.

TABLE 3.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1927, AND BY MONTHS FOR 1927 AND JANUARY THROUGH NOVEMBER, 1928

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1927: January	160.6	158.3	153.0	141.9	124.0	174.3	181.1	211.2	180.8	158.4	152.5	170.1
February	161.0	158.7	153.5	141.9	123.1	171.0	179.6	210.8	180.8	158.4	153.5	170.1
March	161.8	159.6	153.5	142.5	123.1	174.3	179.3	210.0	181.7	158.4	154.6	168.8
April	164.6	163.2	156.1	145.6	125.6	175.7	178.2	210.8	182.6	157.3	152.5	167.9
May	166.5	165.5	157.6	146.9	125.6	173.3	176.3	209.3	180.3	156.2	139.4	167.4
June	166.9	165.9	157.1	146.9	125.6	165.2	174.4	206.3	170.4	156.2	135.2	167.4
July	171.7	170.0	160.1	149.4	126.4	166.2	172.6	203.0	167.1	157.3	134.2	167.0
August	172.0	170.9	160.1	149.4	126.4	179.5	172.2	201.9	166.2	158.4	134.2	167.4
September	172.4	170.9	160.6	150.0	128.1	193.8	172.2	200.0	166.2	158.4	139.4	170.6
October	172.0	170.0	161.1	151.9	130.6	197.6	172.6	199.3	167.6	159.6	145.4	173.3
November	171.3	169.5	161.1	153.1	133.9	172.9	171.5	197.0	167.1	159.6	147.3	174.7
December	172.8	171.3	163.6	156.9	138.0	156.2	167.8	192.9	167.6	160.7	152.5	176.5
1928: January	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.2	172.8	160.7	150.9	177.4
February	176.4	174.4	167.2	160.6	144.6	140.5	161.9	190.3	174.6	160.7	147.0	177.4
March	176.8	175.3	167.2	161.3	146.3	136.2	159.3	187.7	174.6	159.6	149.6	174.2
April	178.3	177.6	168.7	163.1	147.9	149.0	158.9	188.1	177.0	158.4	143.9	172.9
May	181.5	181.2	172.2	166.3	150.4	168.6	159.6	190.3	177.0	158.4	142.6	172.4
June	186.6	186.5	175.3	172.5	152.9	165.7	160.0	192.2	174.2	157.3	140.7	172.4
July	195.7	196.9	181.8	180.6	157.9	177.6	162.6	198.5	172.3	158.4	141.8	173.3
August	200.8	202.2	184.8	185.0	162.0	190.0	165.9	204.5	172.8	158.4	144.7	173.8
September	203.9	205.4	188.9	190.0	170.2	211.0	168.1	208.2	177.9	159.6	150.4	175.1
October	198.0	200.0	185.9	188.8	171.9	179.0	167.8	206.7	177.9	159.6	150.1	175.6
November	193.3	194.6	183.3	185.6	171.9	170.0	164.8	203.0	178.4	160.7	152.2	174.2

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles[1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	203.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1927: January	126.6	162.0	167.9	169.7	170.0	126.4	235.3	136.4	142.5	168.5	159.3
February	124.1	128.1	167.9	169.7	170.0	124.1	223.5	136.4	142.3	167.4	156.0
March	122.8	102.6	167.9	166.7	170.0	124.1	217.6	134.5	142.6	165.4	153.8
April	120.9	98.3	167.9	166.7	170.0	123.0	217.6	132.7	142.6	163.8	153.6
May	120.3	97.4	167.9	166.7	170.0	121.8	264.7	132.7	142.3	161.7	155.4
June	119.0	97.1	166.1	166.7	173.3	123.0	352.9	132.7	142.1	160.7	158.5
July	119.0	107.0	166.1	166.7	173.3	123.0	247.1	134.5	142.5	159.7	153.4
August	119.6	121.7	166.1	169.7	173.3	123.0	200.0	132.7	142.6	159.1	152.4
September	121.5	141.2	166.1	166.7	173.3	121.8	188.2	130.9	141.9	158.7	154.0
October	124.1	164.1	166.1	166.7	173.3	120.7	176.5	130.9	142.5	159.1	156.1
November	123.4	178.8	166.1	163.6	173.3	119.5	176.5	130.9	142.5	160.4	156.5
December	121.5	172.8	164.3	163.6	173.3	118.4	176.5	129.1	142.1	161.4	155.9
1928: January	119.6	162.0	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1
February	115.8	124.9	164.3	160.6	173.3	117.2	176.5	129.1	142.1	163.1	151.6
March	112.7	107.2	162.5	160.6	173.3	116.1	200.0	129.1	142.3	163.8	151.4
April	112.7	103.8	162.5	163.6	176.7	114.9	205.9	129.1	141.9	164.1	152.1
May	114.6	108.7	162.5	169.7	176.7	114.9	194.1	130.9	141.9	164.4	153.8
June	115.2	112.5	164.3	172.7	176.7	113.8	170.6	132.7	142.1	165.1	152.6
July	116.5	120.6	164.3	169.7	176.7	114.9	135.3	132.7	142.3	165.1	152.8
August	118.4	130.4	164.3	163.6	176.7	113.8	129.4	129.1	142.3	165.8	154.2
September	122.2	146.1	162.5	160.6	176.7	114.9	129.4	127.3	142.3	166.1	157.8
October	123.4	157.4	162.5	157.6	176.7	113.8	129.4	125.5	142.5	166.4	156.8
November	121.5	171.9	162.5	154.5	176.7	112.6	129.4	123.6	142.3	166.8	157.3

[1] 22 articles in 1913–1920; 43 articles in 1921–1928.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928

[Exact comparisons of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

Article	Atlanta, Ga.			Baltimore, Md.			Birmingham, Ala.			Boston, Mass.			Bridgeport, Conn.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound	43.5	48.8	49.1	40.7	47.2	45.7	42.5	50.6	50.2	[1]71.1	[1]76.1	[1]76.2	54.6	60.4	57.5
Round steak...do	39.2	45.4	44.1	37.9	43.4	42.1	36.8	43.4	42.6	55.6	63.3	60.6	47.6	54.3	52.5
Rib roast...do	32.8	35.9	36.1	31.9	36.3	36.2	30.4	34.9	34.5	41.3	44.9	44.8	40.9	44.1	43.1
Chuck roast...do	25.8	30.0	30.2	24.1	30.3	28.5	23.5	29.8	28.7	30.7	33.6	34.4	31.1	37.5	36.4
Plate beef...do	15.5	19.8	19.6	16.6	21.7	21.2	15.4	19.6	18.6	21.9	23.7	23.3	12.9	18.5	17.9
Pork chops...do	36.2	37.9	33.9	32.5	34.5	33.4	36.8	36.4	34.1	39.6	39.2	38.3	38.4	40.2	37.8
Bacon, sliced...do	45.2	44.5	42.5	42.1	40.6	39.1	46.9	42.6	43.9	45.8	43.1	43.0	49.9	49.8	49.8
Ham, sliced...do	55.4	54.6	56.3	56.0	57.2	55.9	53.8	54.8	53.3	58.9	60.6	59.6	57.0	59.8	57.9
Lamb, leg of...do	40.2	40.1	39.1	37.9	37.4	36.3	40.9	45.7	42.4	39.3	39.4	38.8	38.1	38.6	38.1
Hens...do	36.1	36.1	36.9	38.1	39.8	40.3	33.4	32.3	34.5	39.1	40.8	40.7	40.2	41.9	41.5
Salmon, canned, red ...do	34.0	34.3	34.8	32.6	30.6	28.9	35.6	34.2	33.8	33.9	31.4	31.3	33.3	32.3	31.0
Milk, fresh...quart	18.0	16.5	16.5	14.0	14.0	14.0	16.7	18.7	18.7	15.5	15.8	15.8	16.0	16.0	16.0
Milk, evaporated ...16-oz. can	13.5	13.5	13.8	11.4	11.1	11.1	12.6	12.1	12.1	12.1	11.7	11.7	11.6	11.6	11.6
Butter...pound	56.7	58.9	59.4	61.0	61.1	60.5	58.9	58.7	56.6	57.1	58.8	59.3	56.0	58.8	58.5
Oleomargarine (all butter substitutes) ...pound	27.3	27.6	28.4	28.0	27.6	27.6	32.8	31.7	31.6	27.9	28.8	29.3	26.8	25.8	25.2
Cheese...do	37.9	36.7	36.9	37.0	37.6	37.1	38.9	38.0	38.2	39.1	40.8	40.6	41.6	43.5	43.4
Lard...do	19.4	18.6	18.9	18.5	18.5	17.6	19.6	19.3	18.7	19.4	19.3	18.9	18.7	18.5	18.2
Vegetable lard substitute...pound	22.9	21.5	22.2	22.9	23.0	22.3	22.1	20.3	19.8	25.4	25.5	25.5	25.4	25.4	25.4
Eggs, strictly fresh ...dozen	57.0	50.5	54.1	61.8	51.5	59.0	53.8	49.3	51.5	85.1	73.0	81.5	83.2	76.2	83.7
Eggs, storage...do	44.3	43.0	45.8	41.5	40.8	41.4	43.7	40.8	43.3	49.3	45.8	49.4	48.6	42.0	48.3
Bread...pound	10.8	10.8	10.8	9.8	8.6	8.6	10.4	9.9	9.9	8.5	8.6	8.6	8.8	8.8	8.8
Flour...do	6.4	6.6	6.7	5.1	4.8	4.7	6.7	6.7	6.5	5.9	5.4	5.4	5.6	5.3	5.2
Corn meal...do	4.1	4.3	4.4	4.2	4.2	4.2	4.2	4.1	4.1	6.4	6.8	7.0	7.9	7.2	7.2
Rolled oats...do	9.4	8.8	9.5	8.3	8.0	8.0	10.3	9.8	9.9	9.1	9.0	9.0	8.5	8.5	8.4
Corn flakes ...8-oz. package	9.8	9.7	9.8	9.2	8.7	8.6	10.5	9.9	9.8	9.9	9.3	9.4	9.6	9.4	9.5
Wheat cereal ...28-oz. package	27.3	26.3	26.7	24.6	24.3	24.2	27.7	27.4	27.2	25.1	25.0	25.0	24.7	24.3	24.3
Macaroni...pound	21.4	21.0	21.8	19.3	19.3	18.9	18.8	18.3	18.3	21.9	21.4	21.3	22.6	22.1	22.3
Rice...do	9.9	9.4	9.5	9.5	8.9	8.7	10.5	9.3	9.4	12.1	10.6	10.8	11.3	10.1	10.9
Beans, navy...do	10.8	13.7	14.1	8.7	12.3	12.1	10.3	13.1	13.1	10.2	12.1	12.1	9.6	12.4	12.3
Potatoes...do	4.1	3.4	3.5	3.0	1.9	1.7	4.5	3.5	3.4	3.0	2.1	2.0	3.0	2.0	1.9
Onions...do	7.1	7.6	8.6	4.1	7.0	6.6	6.5	7.3	7.3	4.7	7.3	7.4	4.9	6.6	6.9
Cabbage...do	4.7	4.8	5.0	3.1	4.7	4.1	5.2	5.1	5.1	4.5	5.3	5.1	4.6	4.8	5.1
Beans, baked ...No. 2 can	11.4	11.3	11.8	10.8	10.8	10.8	11.9	11.2	11.7	13.3	12.4	12.7	11.5	11.5	11.6
Corn, canned...do	18.0	17.4	17.9	14.8	16.5	16.2	16.8	16.8	16.9	18.0	17.3	17.6	19.0	19.0	19.2
Peas, canned...do	19.7	19.2	20.9	15.0	14.9	14.7	21.3	19.5	19.5	20.0	19.7	19.8	20.5	20.6	20.6
Tomatoes, canned ...No. 2 can	11.1	11.2	11.7	10.2	10.5	10.8	10.9	10.4	10.7	11.3	12.7	13.0	13.4	13.3	13.6
Sugar...pound	7.7	7.5	7.4	6.5	5.9	5.8	7.8	7.3	7.1	7.2	6.9	6.8	7.1	6.7	6.7
Tea...do	103.1	103.9	106.4	73.0	73.6	73.0	96.2	97.4	97.8	73.5	72.3	72.5	60.9	61.0	61.0
Coffee...do	48.2	50.3	52.2	43.8	44.8	44.9	50.9	51.4	51.5	51.5	53.9	53.8	46.6	47.9	47.7
Prunes...do	14.8	14.9	15.2	12.0	11.8	11.7	17.4	16.5	16.2	14.2	13.4	13.6	15.2	14.2	15.3
Raisins...do	15.5	13.0	13.2	12.6	11.0	10.8	15.0	13.1	13.0	13.0	11.9	11.9	13.8	12.5	12.5
Bananas...dozen	28.6	29.4	28.9	26.2	24.5	24.0	37.5	37.5	37.7	46.7	42.5	44.2	36.5	34.2	34.2
Oranges...do	41.2	50.8	36.7	50.8	63.1	50.4	46.5	58.3	48.7	60.8	70.4	61.9	66.8	75.5	69.5

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Buffalo, N. Y.			Butte, Mont.			Charleston, S. C.			Chicago, Ill.			Cincinnati, Ohio		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak..pound..	42.5	50.0	47.5	33.0	35.9	35.9	32.7	37.9	36.2	47.8	57.7	55.6	39.3	47.4	45.4
Round steak....do....	36.3	42.8	41.0	30.3	34.5	33.8	30.3	35.7	34.6	38.8	47.7	45.8	35.7	43.9	42.3
Rib roast.....do....	31.8	36.1	35.5	28.0	31.8	31.9	27.0	30.7	29.1	36.5	42.3	41.3	31.7	37.5	37.0
Chuck roast....do....	25.3	31.4	30.7	20.3	25.3	25.0	20.3	25.0	25.2	27.9	35.6	34.8	23.4	29.5	28.4
Plate beef.....do....	15.6	19.8	19.9	13.6	18.0	17.7	14.2	18.3	18.2	16.0	21.0	20.6	16.3	21.4	21.9
Pork chops.....do....	38.5	38.7	37.7	37.1	35.5	35.0	33.2	35.6	35.0	35.9	37.0	35.0	32.5	35.5	32.2
Bacon, sliced....do....	41.2	41.7	41.2	52.5	51.3	50.4	39.5	38.1	37.8	50.7	49.1	47.7	40.1	40.3	40.4
Ham, sliced.....do....	49.0	53.9	52.9	58.8	55.4	55.0	47.4	48.8	47.1	53.7	57.0	55.6	52.0	55.5	53.9
Lamb, leg of....do....	32.7	34.0	33.4	36.3	37.4	36.7	38.8	43.3	44.0	37.7	38.4	38.0	35.6	39.3	38.8
Hens.....do....	36.6	39.6	38.8	32.9	33.4	31.9	35.5	37.3	37.7	36.0	39.6	39.2	35.0	38.9	38.4
Salmon, canned, red.....do....	33.1	30.8	30.7	32.7	32.1	32.0	33.1	28.9	29.2	36.1	34.6	34.6	36.4	31.3	31.3
Milk, fresh.....quart..	13.0	14.0	14.0	14.0	14.0	14.0	19.0	18.7	18.7	14.0	14.0	14.0	13.3	14.0	14.0
Milk, evaporated ....16-oz. can..	11.3	11.1	11.1	10.9	10.7	10.8	11.8	11.7	11.8	11.3	11.2	11.3	11.2	11.2	11.3
Butter.....pound..	57.7	57.7	58.9	53.2	56.0	56.4	53.0	56.4	56.2	56.2	55.2	57.0	55.6	58.6	60.0
Oleomargarine (all butter substitutes) ....pound..	27.8	27.3	27.7	.....	.....	.....	29.5	29.0	28.9	27.5	27.0	26.9	28.7	28.8	28.9
Cheese.....do....	38.7	39.5	39.8	37.5	37.7	38.2	36.4	35.5	35.2	43.4	44.0	43.8	40.4	40.3	39.8
Lard.....do....	19.0	18.6	18.1	23.0	22.1	22.0	21.3	18.7	18.9	19.8	19.7	20.3	18.0	18.9	18.4
Vegetable lard substitute.....pound..	25.7	25.7	25.5	30.6	30.6	30.6	22.1	21.6	21.7	26.5	26.2	26.1	26.1	25.6	25.6
Eggs, strictly fresh ....dozen..	67.8	57.2	62.5	59.6	54.4	57.5	57.0	53.8	56.5	59.6	52.0	58.6	64.8	49.9	57.9
Eggs, storage....do....	43.6	44.9	43.8	38.1	42.7	42.3	39.6	41.4	40.5	44.8	43.0	46.9	41.3	40.3	43.4
Bread.....pound..	8.7	8.7	8.7	9.8	9.8	9.8	10.9	11.0	11.0	9.9	9.9	9.9	8.7	8.5	8.5
Flour.....do....	4.8	4.7	4.6	5.3	5.0	4.9	6.9	6.8	6.7	4.9	4.6	4.5	5.6	5.6	5.5
Corn meal.....do....	5.1	5.1	5.1	6.1	6.2	6.4	3.9	4.0	4.0	6.7	7.0	7.0	4.4	4.6	4.6
Rolled oats.....do....	8.8	8.9	8.8	7.6	7.7	7.6	9.4	9.4	9.2	8.6	8.4	8.4	8.9	9.0	9.0
Corn flakes .....8-oz. package..	9.3	9.1	9.2	10.5	10.3	10.5	9.9	10.0	9.9	9.5	9.3	9.3	9.6	9.6	9.6
Wheat cereal .....28-oz. package..	24.8	24.9	24.9	28.5	28.1	28.1	25.7	25.5	25.4	25.5	25.4	25.3	25.1	24.9	24.9
Macaroni.....pound..	21.5	21.2	21.2	19.7	19.7	19.9	18.7	18.5	18.7	19.0	18.9	18.9	18.6	18.5	18.5
Rice.....do....	10.0	9.5	9.4	11.0	11.3	11.1	7.1	6.7	6.8	10.6	10.5	10.4	10.0	9.8	9.5
Beans, navy....do....	9.4	12.4	12.1	9.9	11.4	11.5	10.1	14.5	14.3	9.6	12.7	12.4	8.8	12.7	12.5
Potatoes.....do....	2.9	2.0	1.9	1.5	1.6	1.5	3.4	2.5	2.6	2.8	2.1	2.1	3.0	2.3	2.3
Onions.....do....	5.6	6.4	6.8	3.9	4.8	5.8	5.6	6.9	7.2	5.0	5.9	6.4	4.6	6.0	6.3
Cabbage.....do....	2.8	3.8	3.8	3.4	3.5	3.5	4.1	5.4	5.3	4.0	4.1	4.3	3.4	4.5	4.4
Beans, baked .....No. 2 can..	10.0	10.1	10.5	13.5	13.8	13.7	10.0	10.3	10.2	12.6	12.9	13.1	10.5	11.0	11.2
Corn, canned....do....	15.8	15.8	15.8	14.6	14.8	15.0	14.3	14.2	14.2	15.9	15.7	15.5	15.2	15.3	15.5
Peas, canned....do....	16.0	16.3	16.0	13.8	13.8	13.8	16.4	16.2	16.2	16.0	17.0	17.0	17.1	16.7	16.6
Tomatoes, canned .....No. 2 can..	13.3	12.5	12.4	12.8	12.8	12.8	9.9	10.0	10.2	13.8	13.6	13.8	11.9	12.3	12.7
Sugar.....pound..	6.8	6.5	6.3	8.6	8.3	8.0	6.7	6.6	6.4	6.9	6.8	6.7	7.4	7.3	7.2
Tea.....do....	68.5	68.2	68.1	82.2	83.1	82.6	82.4	82.4	82.4	71.8	69.2	69.2	79.1	81.0	80.0
Coffee.....do....	45.5	47.1	47.6	54.1	55.5	55.5	43.2	46.2	46.9	46.7	47.6	47.6	44.1	46.1	46.3
Prunes.....do....	13.7	13.8	13.9	14.5	14.7	14.5	12.2	11.5	12.2	15.6	15.5	15.4	13.7	14.3	14.2
Raisins.....do....	13.4	12.4	11.5	14.6	14.0	13.8	14.0	10.2	10.2	14.4	13.2	12.2	14.0	13.5	12.4
Bananas.....dozen..	41.6	39.6	40.9	[1] 13.0	[1] 12.5	[1] 13.0	25.0	26.0	27.5	39.3	39.0	38.9	38.3	38.3	40.6
Oranges.....do....	58.4	63.8	61.5	60.7	67.5	61.2	31.5	43.6	27.9	61.4	66.5	58.4	47.8	63.4	52.7

[1] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Cleveland, Ohio			Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak..pound..	41.6	47.5	45.3	41.5	50.2	48.6	37.8	43.8	44.5	34.4	43.1	40.7	43.9	51.8	51.0
Round steak....do....	35.5	42.4	40.4	36.7	45.2	43.2	34.0	40.7	40.7	31.4	39.9	37.2	36.6	44.1	42.8
Rib roast.....do....	28.8	34.3	33.5	31.9	38.6	38.7	29.2	36.3	36.4	25.5	31.7	30.4	32.3	37.7	37.4
Chuck roast.....do....	25.1	30.3	30.3	26.4	33.7	33.0	24.0	30.0	31.4	20.1	27.2	26.2	25.3	31.5	30.5
Plate beef.....do....	15.0	19.7	20.2	17.0	23.1	22.8	19.0	24.1	24.0	12.5	17.5	17.3	15.1	20.0	19.8
Pork chops.....do....	35.7	36.1	34.6	35.8	36.8	33.5	36.5	37.9	37.7	35.1	36.5	34.3	37.1	40.7	37.3
Bacon, sliced.....do....	44.6	44.0	42.5	48.5	47.0	44.8	48.9	46.5	47.1	45.4	44.7	43.0	47.4	46.1	46.0
Ham, sliced.....do....	52.5	55.3	55.3	53.3	55.4	53.3	55.0	57.1	57.7	52.1	54.5	53.3	54.6	60.2	59.7
Lamb, leg of.....do....	35.8	37.5	36.3	42.5	44.2	43.7	43.3	47.2	45.6	36.2	36.6	34.7	38.9	39.6	39.2
Hens.....do....	35.0	38.9	38.9	35.9	38.2	38.5	32.1	34.1	35.1	28.5	31.6	31.5	37.4	39.7	39.5
Salmon, canned, red.....do....	34.8	32.3	31.8	36.9	35.7	35.0	38.9	35.5	34.7	36.5	33.6	32.7	35.9	30.1	30.3
Milk, fresh.....quart..	14.0	13.3	13.7	12.0	11.0	12.0	13.0	13.0	13.0	12.0	12.0	12.0	14.0	14.0	14.0
Milk, evaporated .....16-oz. can..	11.4	11.2	11.2	11.7	11.5	11.5	13.5	13.5	13.9	10.7	10.7	10.7	11.2	11.0	11.1
Butter.....pound..	59.8	59.7	60.5	55.6	56.5	58.2	56.7	58.7	58.8	51.2	52.5	53.5	57.1	56.5	58.5
Oleomargarine (all butter substitutes) .....pound..	28.9	29.0	28.5	28.5	27.4	27.4	30.4	28.5	28.7	24.6	25.0	25.0	27.3	26.6	26.4
Cheese.....do....	39.8	40.8	39.4	37.8	38.0	36.9	38.8	37.9	38.2	39.4	40.7	39.5	40.9	39.5	38.9
Lard.....do....	21.0	20.7	20.2	17.3	17.3	17.2	22.9	20.9	20.9	19.8	19.6	19.3	19.3	19.2	18.9
Vegetable lard substitute.....pound..	26.9	26.6	26.4	26.3	27.3	27.8	24.5	22.4	23.3	22.5	21.8	21.1	26.8	26.4	26.3
Eggs, strictly fresh .....dozen..	66.4	55.6	62.6	55.1	45.1	51.2	48.8	48.5	53.8	57.7	49.9	56.8	63.3	53.4	59.3
Eggs, storage.....do....	41.5	43.0	44.1	41.3	40.0	41.0	40.0	41.0	44.7	41.0	41.1	44.7	41.6	42.2	41.1
Bread.....pound..	7.7	7.8	7.8	7.7	7.8	7.8	9.5	9.2	9.3	8.0	7.7	7.7	8.3	8.1	8.2
Flour.....do....	5.5	5.4	5.2	5.1	5.1	5.1	5.5	5.2	5.3	4.3	4.0	4.0	5.1	4.7	4.6
Corn meal.....do....	5.5	5.8	5.4	4.1	4.3	4.2	4.5	4.6	4.6	4.5	4.5	4.5	5.8	6.1	6.0
Rolled oats.....do....	9.3	9.2	9.0	9.0	9.1	9.3	10.7	10.1	10.1	7.7	7.5	7.6	9.6	9.2	9.1
Corn flakes .....8-oz. package..	9.9	10.0	9.8	9.9	9.6	9.6	10.5	10.2	10.1	9.5	9.5	9.5	9.8	9.4	9.4
Wheat cereal .....28-oz. package..	25.4	25.8	25.8	26.2	26.4	26.7	27.8	27.4	27.6	24.5	24.6	24.6	25.8	25.4	25.9
Macaroni.....pound..	21.9	20.8	20.6	21.0	20.1	20.4	21.5	21.1	20.7	19.3	19.4	19.8	22.3	21.1	21.2
Rice.....do....	10.7	10.1	9.5	12.1	11.4	11.0	12.0	11.6	11.9	9.5	8.9	9.1	11.4	10.8	11.1
Beans, navy.....do....	8.7	12.6	12.3	8.8	12.8	12.5	11.3	12.9	13.3	9.5	11.4	11.7	8.8	12.5	12.2
Potatoes.....do....	3.1	2.3	2.2	2.7	2.1	2.0	4.9	4.4	4.3	2.1	1.5	1.7	2.5	1.6	1.5
Onions.....do....	4.3	6.5	6.6	4.6	6.5	6.8	7.0	7.3	7.6	3.9	4.7	4.8	4.0	5.6	6.3
Cabbage.....do....	3.6	4.8	4.4	4.3	4.4	4.4	5.7	5.2	5.5	2.7	2.1	2.8	3.2	3.8	3.3
Beans, baked .....No. 2 can..	12.8	12.3	12.0	12.6	12.3	11.8	13.1	12.5	12.6	10.9	11.4	11.5	11.3	11.6	11.9
Corn, canned.....do....	16.7	16.8	16.4	14.3	14.3	14.3	18.9	18.6	18.4	13.9	13.9	13.7	16.2	15.7	15.8
Peas, canned.....do....	17.6	17.5	16.8	14.8	14.8	14.8	22.2	22.3	22.5	15.1	15.0	14.9	17.1	15.7	16.2
Tomatoes, canned .....No. 2 can..	14.0	13.8	13.5	13.3	13.0	12.8	13.2	11.8	12.3	12.1	11.8	11.6	12.7	12.4	12.6
Sugar.....pound..	7.6	7.5	7.2	7.8	7.5	7.4	8.1	7.6	7.5	7.7	7.3	7.4	7.4	7.1	7.0
Tea.....do....	81.2	81.8	80.7	89.3	86.5	86.5	107.8	102.9	104.8	69.6	70.0	70.0	73.0	74.8	74.3
Coffee.....do....	51.4	52.5	51.6	48.2	49.5	49.6	57.1	59.1	59.4	48.4	50.0	50.1	48.3	49.6	52.3
Prunes.....do....	13.9	13.8	13.9	15.8	15.2	16.2	18.9	17.0	17.2	14.5	14.4	14.3	14.9	14.4	14.5
Raisins.....do....	13.7	12.9	12.3	14.2	12.5	11.3	15.8	14.4	14.4	13.6	11.0	10.8	13.9	11.6	11.8
Bananas.....dozen..	[1]10.5	[1]9.5	[1]9.9	38.6	39.0	38.0	35.0	35.0	34.0	[1]11.9	[1]10.8	[1]10.9	34.7	35.0	36.0
Oranges.....do....	55.6	68.5	58.1	52.9	68.6	56.6	54.3	62.2	60.8	51.9	62.0	61.1	64.2	69.7	68.5

[1] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Fall River, Mass.			Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.			Kansas City, Mo.		
	1927	1928		1927	1928		1927	1928		1927	1928		1927	1928	
	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound..	[1] 65.4	[2] 74.3	[1] 70.3	35.0	39.1	38.9	42.9	47.1	46.9	35.4	40.0	39.1	39.8	47.9	47.5
Round steak....do....	50.0	59.1	56.5	34.5	38.2	38.2	38.7	45.7	44.4	31.6	35.0	34.6	34.7	43.3	42.1
Rib roast.....do....	33.8	41.5	39.8	27.5	29.8	30.2	29.2	35.3	34.9	27.1	31.1	30.3	27.7	33.4	33.3
Chuck roast....do....	25.5	32.7	29.9	22.0	24.7	24.9	25.4	30.6	30.8	20.8	24.5	23.9	21.6	27.3	27.5
Plate beef.....do....	15.0	20.0	18.8	19.2	21.2	21.2	16.4	21.7	22.1	13.4	16.0	15.3	15.6	19.9	20.3
Pork chops.....do....	37.1	39.8	36.2	35.6	34.4	34.4	33.8	36.0	33.6	32.4	32.5	30.9	32.5	34.9	33.6
Bacon, sliced....do....	42.9	42.7	42.0	45.0	42.1	41.8	44.1	44.6	42.4	40.5	39.4	40.0	45.9	44.6	43.0
Ham, sliced.....do....	52.7	53.2	52.6	50.9	49.5	49.1	51.5	54.9	55.6	49.2	49.6	48.6	49.9	53.9	51.3
Lamb, leg of.....do....	40.6	40.6	41.5	32.0	31.6	32.2	39.0	40.9	40.4	38.5	40.0	38.0	35.3	35.6	33.7
Hens.....do....	43.6	45.2	44.0	32.5	36.9	37.0	34.8	39.5	41.3	33.7	35.0	35.9	32.0	33.6	33.8
Salmon, canned, red .....pound..	25.4	34.7	34.4	33.8	31.1	30.3	34.2	32.3	33.6	34.1	32.7	31.9	36.1	35.6	35.4
Milk, fresh.....quart..	15.0	14.7	14.7	15.6	15.0	15.2	12.0	12.0	13.0	20.3	20.3	20.3	13.0	13.0	13.0
Milk, evaporated .....16-oz. can..	12.7	12.8	12.6	11.6	11.3	11.4	10.7	10.5	10.5	11.9	11.5	11.7	11.7	11.3	11.3
Butter.....pound..	53.8	57.5	57.3	55.7	55.9	56.6	55.9	56.8	58.0	54.2	57.2	56.9	54.2	55.1	56.6
Oleomargarine (all butter substitutes) .....pound..	28.8	27.1	27.4	27.3	24.8	24.6	29.2	28.6	28.6	30.1	29.7	30.1	25.4	25.7	25.3
Cheese.....do....	40.2	42.5	41.8	35.1	34.0	33.7	38.9	42.8	42.9	36.8	35.5	35.1	38.0	37.5	36.8
Lard.....do....	18.7	19.2	18.6	20.4	19.7	19.8	17.5	17.7	17.4	22.0	19.1	19.3	19.3	19.1	18.9
Vegetable lard substitute.....pound..	26.7	26.4	26.9	18.0	16.6	16.5	27.4	26.8	26.9	21.5	22.1	21.7	26.2	25.7	26.4
Eggs, strictly fresh .....dozen..	85.9	76.6	80.7	42.9	45.2	45.4	56.8	47.5	51.6	62.3	64.1	66.0	52.8	43.8	49.4
Eggs, storage....do....	45.6	49.1	51.6	38.8	38.0	38.0	45.8	38.5	42.3	41.3	47.8	47.0	39.1	40.0	41.4
Bread.....pound..	9.0	8.8	8.8	8.5	8.0	8.0	8.1	7.9	7.9	10.9	10.1	10.1	9.7	9.6	9.6
Flour.....do....	5.5	5.7	5.6	5.1	5.0	4.9	5.6	5.2	5.2	6.4	6.1	6.0	4.9	4.8	4.8
Corn meal.....do....	6.7	7.2	7.1	4.2	4.3	4.3	4.2	4.1	4.1	4.2	4.3	4.3	5.1	5.4	5.3
Rolled oats.....do....	9.7	9.7	9.5	8.9	8.5	8.5	8.5	8.5	8.2	9.1	9.3	9.4	9.0	9.1	8.9
Corn flakes .....8-oz. package..	10.0	9.8	9.8	9.1	8.7	8.9	9.4	8.9	8.9	9.8	9.5	9.6	9.8	9.7	9.7
Wheat cereal .....28-oz. package..	24.6	25.3	25.0	25.0	25.2	25.2	26.0	25.6	26.0	24.6	25.2	24.7	27.0	27.1	27.1
Macaroni.....pound..	23.5	23.3	23.7	18.0	18.1	18.5	19.2	18.7	18.8	19.2	19.7	18.8	19.8	20.1	20.0
Rice.....do....	10.6	10.8	10.8	8.1	7.1	7.0	10.8	10.7	10.9	9.2	7.2	7.4	9.5	9.2	9.3
Beans, navy.....do....	10.4	12.8	12.6	9.8	12.4	12.3	8.6	12.9	12.8	9.8	12.8	13.2	9.5	12.8	12.7
Potatoes.....do....	3.0	1.9	1.9	4.3	3.9	3.6	2.7	2.0	1.8	3.7	3.2	3.0	2.4	1.5	1.6
Onions.....do....	5.0	7.5	7.6	4.9	5.6	6.7	5.6	6.5	6.4	5.4	7.7	7.9	5.4	7.2	7.4
Cabbage.....do....	4.9	5.7	5.8	5.1	4.8	4.8	4.0	4.1	4.2	4.2	4.7	4.7	3.7	3.7	3.8
Beans, baked .....No. 2 can..	12.4	12.8	12.6	10.7	10.9	10.5	10.8	10.4	10.3	10.3	10.5	10.8	12.0	11.8	12.3
Corn, canned....do....	16.4	17.2	16.5	13.5	14.5	14.4	14.0	13.8	14.0	18.1	17.2	18.0	14.4	14.5	14.8
Peas, canned....do....	17.9	19.6	19.1	13.0	14.8	14.8	13.8	14.5	14.8	17.9	16.5	17.2	15.5	15.2	14.9
Tomatoes, canned .....No. 2 can..	12.4	12.6	12.5	9.7	9.9	9.9	12.9	12.4	12.6	9.8	10.5	11.1	11.3	11.0	11.3
Sugar.....pound..	7.2	6.8	6.8	6.8	6.8	6.7	7.5	7.3	7.2	7.1	7.1	7.0	7.4	7.2	7.2
Tea.....do....	63.7	58.3	58.8	84.2	85.7	85.7	85.7	84.8	83.9	98.9	96.7	97.4	92.1	93.4	92.4
Coffee.....do....	48.8	50.9	50.6	41.5	44.3	44.4	47.8	47.8	47.9	46.4	49.3	48.3	50.1	52.2	52.6
Prunes.....do....	14.1	13.5	14.1	13.0	13.0	13.0	16.4	15.0	16.5	14.9	16.1	15.2	14.3	14.4	13.9
Raisins.....do....	13.5	13.2	12.8	12.9	12.0	10.8	15.2	13.6	13.8	14.8	14.0	12.7	14.4	12.7	12.4
Bananas.....dozen..	[1] 10.3	[2] 9.0	[2] 9.3	27.2	26.8	27.1	30.5	29.0	29.5	29.3	28.6	31.7	[1] 10.8	[2] 10.7	[2] 10.9
Oranges.....do....	56.7	61.5	49.8	41.8	51.3	51.9	53.8	62.5	52.2	33.6	35.8	29.2	55.3	64.1	64.3

[1] Per pound.
[2] The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.			Memphis, Tenn.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound..	37.1	44.1	44.1	39.0	45.4	45.1	37.2	45.0	42.9	[1] 59.8	[1] 65.9	[1] 63.1	38.9	49.4	48.7
Round steak...do....	35.0	39.9	39.6	32.0	38.6	38.5	34.1	39.2	38.3	46.5	54.4	53.8	36.4	46.3	45.9
Rib roast.....do....	30.0	35.2	35.6	30.7	36.1	35.9	27.5	32.1	31.8	30.0	35.5	34.2	28.8	34.9	35.1
Chuck roast...do....	23.0	28.5	28.5	22.1	27.9	27.9	21.6	26.9	26.7	25.5	31.1	30.2	22.3	28.9	28.9
Plate beef.....do....	17.3	20.8	21.3	15.1	20.7	20.8	17.8	21.2	21.7	16.9	24.0	22.2	18.8	22.4	22.4
Pork chops.....do....	32.7	34.8	33.4	42.6	44.4	42.8	32.7	34.6	31.3	36.6	36.6	35.8	30.7	34.4	32.9
Bacon, sliced...do....	46.5	44.7	44.4	53.6	53.8	51.7	47.7	45.4	44.6	39.0	38.8	38.5	39.2	37.6	36.4
Ham, sliced.....do....	50.0	53.9	52.9	68.0	71.3	69.1	47.7	51.2	50.4	44.0	48.1	47.4	51.4	53.2	52.5
Lamb, leg of...do....	38.1	41.8	39.4	36.9	38.1	38.0	38.6	37.4	38.4	36.7	37.8	37.3	35.7	37.0	36.0
Hens.....do....	29.8	31.4	31.0	42.9	46.4	47.1	33.4	36.4	37.3	41.7	42.8	42.1	30.5	32.8	33.7
Salmon, canned, red ...pound..	34.3	34.0	32.6	34.2	29.9	29.9	33.4	32.1	30.5	34.9	31.4	30.2	30.4	33.4	33.4
Milk, fresh.....quart..	15.0	14.0	14.0	15.0	15.0	15.0	13.0	12.8	13.0	15.0	15.0	15.0	15.0	15.0	15.0
Milk, evaporated ...16-oz. can..	12.2	11.8	11.8	10.2	9.9	10.0	11.9	11.9	11.8	12.9	12.6	12.7	11.6	11.6	11.5
Butter.....pound..	54.8	55.7	60.1	56.9	59.9	58.6	56.4	59.0	59.2	56.1	59.0	59.1	55.6	56.3	57.7
Oleomargarine (all butter substitutes) ...pound..	27.6	26.8	27.1	26.0	25.3	25.6	27.3	27.9	27.6	24.8	28.3	27.1	25.1	24.4	24.4
Cheese.....do....	39.1	37.4	36.8	38.4	38.3	38.4	39.0	39.4	38.0	38.1	39.1	39.1	37.3	36.2	35.8
Lard.....do....	21.7	20.4	20.1	20.6	21.4	20.9	18.5	18.7	18.7	18.7	18.5	18.3	16.4	17.3	16.4
Vegetable lard substitute.....pound..	21.0	21.1	20.9	23.9	24.5	24.1	27.6	27.4	26.9	26.5	25.8	26.2	21.8	21.0	21.7
Eggs, strictly fresh ...dozen..	48.4	46.7	48.5	58.8	57.4	59.9	57.1	46.6	49.5	75.7	65.2	69.9	48.8	43.8	47.1
Eggs, storage...do....	41.7	45.0	41.8	46.0	45.3	45.3	----	----	----	46.6	49.3	50.0	38.5	39.8	40.0
Bread.....pound..	9.3	9.3	9.3	8.5	8.6	8.6	9.2	9.2	9.2	8.7	8.7	8.7	9.5	9.5	9.5
Flour.....do....	6.1	6.0	6.0	5.1	5.0	4.9	6.1	6.1	6.1	5.5	5.1	5.0	6.0	6.0	6.0
Corn meal.....do....	4.0	4.1	4.1	5.6	5.8	5.9	4.2	4.2	4.0	5.3	5.3	5.3	3.7	3.9	3.8
Rolled oats.....do....	10.2	10.6	10.6	10.0	9.9	9.9	8.5	8.6	8.7	8.9	8.7	8.6	9.0	9.0	8.9
Corn flakes ...8-oz. package..	10.3	9.8	9.8	9.5	9.4	9.4	9.8	9.5	9.4	9.6	9.1	9.1	9.8	9.8	9.8
Wheat cereal ...28-oz. package..	27.3	27.0	27.3	24.9	25.0	25.0	25.0	27.1	26.5	25.9	25.7	25.4	25.8	25.8	25.5
Macaroni.....pound..	20.8	20.2	20.3	18.5	18.1	18.1	18.9	18.9	18.8	23.4	23.2	23.2	19.4	19.5	19.5
Rice.....do....	8.4	7.9	7.7	10.0	9.9	10.1	10.8	11.2	10.6	9.5	8.9	9.0	8.6	8.2	8.0
Beans, navy.....do....	9.3	12.7	13.1	9.6	11.9	12.1	8.4	12.8	12.8	9.1	12.4	12.2	9.5	12.1	12.4
Potatoes.....do....	3.5	2.6	2.9	3.1	2.6	2.5	2.9	2.2	2.1	2.7	1.7	1.6	3.2	2.9	3.0
Onions.....do....	5.4	6.7	7.6	4.7	4.9	5.5	5.2	5.7	7.1	4.3	6.7	6.8	4.6	5.7	6.3
Cabbage.....do....	4.3	4.6	4.8	4.4	6.1	5.3	4.0	4.4	4.4	3.1	4.2	4.4	3.4	3.8	3.8
Beans, baked ...No. 2 can..	10.2	11.2	11.6	10.8	11.6	11.3	10.2	10.9	11.2	12.9	13.4	13.2	11.0	11.4	11.1
Corn, canned...do....	16.8	15.9	15.8	15.5	15.6	16.0	15.7	15.3	15.1	16.1	16.0	16.0	14.7	14.5	14.4
Peas, canned...do....	17.5	17.2	18.3	16.5	17.1	17.1	15.2	15.5	15.5	18.2	17.6	17.2	15.0	15.1	15.0
Tomatoes, canned ...No. 2 can..	10.3	10.1	10.4	[4] 14.9	[4] 15.0	[4] 14.9	10.6	10.9	11.0	12.3	12.1	12.4	9.9	9.9	9.9
Sugar.....pound..	7.6	7.5	7.4	6.9	6.6	6.4	7.3	7.2	7.4	7.3	6.9	6.8	7.1	7.0	6.8
Tea.....do....	103.8	104.9	104.9	74.4	74.9	74.9	90.0	91.9	93.8	65.2	64.9	65.6	98.4	96.9	97.6
Coffee.....do....	52.8	54.6	54.6	51.6	53.9	54.0	46.7	50.5	51.6	48.6	51.0	51.6	47.6	49.6	48.9
Prunes.....do....	15.4	14.9	15.0	12.7	12.8	13.0	14.3	15.5	16.0	13.3	13.0	13.1	13.9	13.4	14.1
Raisins.....do....	14.5	14.0	14.0	11.9	10.2	10.2	14.0	13.0	12.1	13.6	12.1	11.7	14.6	13.7	13.2
Bananas.....dozen..	[2] 9.0	[2] 8.9	[2] 9.1	[2] 10.0	[2] 9.5	[2] 9.3	[2] 10.8	[2] 10.2	[2] 10.1	[2] 9.5	[2] 8.9	[2] 9.2	[2] 9.0	[2] 9.1	[2] 8.7
Oranges.....do....	49.6	58.4	58.0	58.5	55.4	53.0	44.6	54.0	45.9	51.7	70.9	58.3	42.9	56.0	40.5

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Milwaukee, Wis.			Minneapolis, Minn.			Mobile, Ala.			Newark, N. J.			New Haven, Conn.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak...pound..	41.1	47.5	44.9	35.2	43.0	41.6	35.9	43.3	42.8	48.7	55.6	54.8	58.7	65.9	64.1
Round steak...do....	35.9	42.4	40.4	31.2	38.3	36.6	35.0	41.7	42.0	46.4	52.3	52.5	47.3	54.5	53.7
Rib roast...do....	29.5	34.5	33.6	27.8	32.4	31.6	29.5	33.3	32.2	37.8	42.0	41.3	38.9	42.9	42.8
Chuck roast...do....	26.3	32.5	31.3	23.0	28.5	27.7	23.6	27.8	26.7	28.6	34.2	33.3	29.2	35.6	35.4
Plate beef...do....	16.0	21.2	20.4	14.3	18.5	18.3	18.4	22.6	22.4	16.0	19.9	20.5	16.2	20.0	20.2
Pork chops...do....	33.1	34.8	33.8	34.4	37.8	35.8	37.7	36.1	36.1	36.4	40.2	37.9	38.3	38.0	37.5
Bacon, sliced...do....	46.8	46.2	44.8	46.4	48.8	47.0	44.8	42.3	43.3	45.0	44.0	44.6	46.2	46.9	46.0
Ham, sliced...do....	47.6	51.2	50.8	50.8	53.8	52.8	52.1	51.8	50.9	55.2	57.7	55.6	58.7	62.0	60.5
Lamb, leg of...do....	37.2	39.6	38.5	33.6	34.0	33.6	41.4	41.7	43.3	38.5	38.9	39.3	39.3	39.5	39.3
Hens...do....	29.9	34.9	34.0	30.7	34.0	33.9	36.3	33.0	33.0	36.4	39.3	39.4	39.9	43.1	42.1
Salmon, canned, red ...pound..	33.8	32.7	33.0	36.0	35.5	35.3	34.7	33.1	31.6	32.8	30.9	30.1	34.3	34.1	33.5
Milk, fresh...quart..	11.0	11.0	11.0	12.0	12.0	12.0	17.8	18.0	18.0	16.0	16.0	16.0	16.0	16.0	16.0
Milk, evaporated ...16-oz. can..	11.3	11.2	11.1	11.6	11.7	11.7	11.8	11.3	11.3	11.5	10.8	11.0	12.1	11.9	12.0
Butter...pound..	54.2	54.5	56.6	53.9	53.7	56.0	56.6	57.0	57.9	59.3	59.3	60.4	54.9	58.0	57.9
Oleomargarine (all butter substitutes) ...pound...	27.1	26.7	26.7	25.6	25.8	26.4	29.4	30.1	30.6	30.2	29.6	30.0	29.0	29.1	29.1
Cheese...do....	37.1	38.1	37.6	36.5	37.4	37.1	38.1	36.6	36.6	40.9	41.1	40.6	40.1	41.5	41.6
Lard...do....	19.5	19.6	19.3	18.5	19.8	19.7	19.8	18.8	18.3	19.7	19.6	19.9	18.7	19.9	19.2
Vegetable lard substitute...pound..	26.7	26.4	26.3	27.0	26.8	26.7	21.3	20.1	20.0	25.4	25.3	25.5	25.4	26.0	25.9
Eggs, strictly fresh ...dozen..	61.8	46.8	56.6	50.6	41.4	46.4	53.0	50.6	53.0	74.7	65.9	69.9	80.9	75.4	80.7
Eggs, storage...do....	39.1	39.1	39.6	37.5	34.3	38.1	42.0	43.7	44.9	42.9	45.3	45.1	49.6	48.0	49.9
Bread...pound..	9.1	8.7	8.7	8.7	8.9	8.9	10.1	10.1	10.1	9.5	9.1	9.2	9.2	9.0	9.0
Flour...do....	4.8	4.5	4.4	5.1	4.8	4.6	6.1	6.1	6.0	5.3	5.0	4.8	5.4	5.3	5.2
Corn meal...do....	5.6	5.9	5.8	5.3	5.7	5.6	4.1	4.1	4.0	7.0	6.9	6.7	7.0	6.9	6.8
Rolled oats...do....	8.4	8.2	8.1	8.1	7.9	7.8	8.6	8.4	8.5	8.2	8.3	8.1	9.7	9.3	9.3
Corn flakes ...8-oz. package..	9.3	9.3	9.2	9.8	9.6	9.6	9.5	9.3	9.2	9.3	8.8	8.8	10.2	10.1	10.0
Wheat cereal ...28-oz. package..	24.6	24.6	24.6	25.5	25.4	25.4	24.5	25.0	25.0	24.2	24.6	24.6	24.6	24.6	24.8
Macaroni...pound..	17.4	17.8	17.7	18.8	17.9	18.0	20.7	21.3	21.3	21.4	21.4	21.5	22.3	22.4	22.4
Rice...do....	10.4	10.2	10.3	10.3	9.8	9.3	9.5	8.6	8.4	10.2	9.9	9.5	10.2	10.4	10.4
Beans, navy...do....	8.6	13.0	12.9	9.9	13.3	13.3	9.2	11.8	12.2	10.0	13.0	13.1	9.4	11.8	11.9
Potatoes...do....	2.5	1.7	1.5	1.9	1.1	1.3	3.7	3.0	3.0	3.3	2.2	2.3	3.2	2.2	2.1
Onions...do....	4.3	5.0	5.6	4.5	5.3	5.6	4.5	6.0	6.3	5.0	7.3	7.2	5.3	6.9	6.8
Cabbage...do....	2.8	3.0	3.1	2.8	2.4	2.6	4.7	4.4	4.8	4.4	5.4	5.1	4.5	5.2	5.2
Beans, baked ...No. 2 can..	11.2	11.5	11.6	12.4	12.4	12.0	10.2	10.6	10.5	10.3	10.9	11.0	11.7	12.1	11.9
Corn, canned...do....	15.8	16.2	16.2	14.0	15.3	14.8	15.8	14.7	14.8	15.1	17.1	16.9	18.1	18.2	18.1
Peas, canned...do....	15.2	15.7	15.9	14.4	15.0	15.0	15.3	15.9	15.4	17.8	16.9	17.1	18.8	21.5	21.1
Tomatoes, canned ...No. 2 can..	13.2	13.2	13.2	13.5	13.3	12.8	10.2	10.3	10.3	10.5	10.8	10.8	13.0	13.4	13.3
Sugar...pound..	6.8	6.7	6.5	7.3	7.0	6.9	7.1	6.8	6.9	6.7	6.5	6.4	7.1	6.8	6.7
Tea...do....	70.0	68.8	68.8	60.6	69.2	68.9	80.3	78.6	80.8	60.1	59.0	57.8	60.3	60.3	60.3
Coffee...do....	42.7	46.0	45.0	50.3	53.8	53.8	47.8	47.9	48.8	46.9	49.2	49.3	49.4	51.9	51.9
Prunes...do....	14.1	14.2	13.7	14.9	14.6	15.1	12.5	12.9	12.8	14.0	13.0	13.3	14.2	13.4	14.4
Raisins...do....	13.9	13.2	12.6	14.3	12.7	12.3	13.8	11.2	10.7	14.4	12.1	11.8	13.5	13.3	12.9
Bananas...dozen..	[1] 10.0	[2] 9.4	[2] 9.7	[2] 11.3	[2] 10.3	[2] 10.6	25.0	25.0	24.2	38.0	37.0	36.3	32.5	33.8	34.1
Oranges...do....	53.2	65.5	64.3	60.4	64.3	61.3	46.0	56.5	48.4	57.4	73.3	60.9	54.9	71.6	67.1

[1] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	New Orleans, La.			New York, N. Y.			Norfolk, Va.			Omaha, Nebr.			Peoria, Ill.		
	1927	1928		1927	1928		1927	1928		1927	1928		1927	1928	
	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15	Nov. 15	Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak..pound..	36.3	44.6	43.3	50.3	55.4	53.9	41.9	48.5	47.2	39.1	49.2	46.9	35.5	40.3	39.7
Round steak.....do....	32.5	39.1	38.6	47.1	51.8	50.9	36.4	42.3	41.5	36.8	45.3	44.1	34.4	39.4	38.8
Rib roast.....do....	30.8	35.9	35.5	42.6	46.1	44.9	32.9	38.3	39.0	26.6	33.9	32.4	25.3	31.8	31.3
Chuck roast.....do....	21.7	26.3	25.7	28.4	31.4	31.4	23.9	28.3	28.1	23.2	30.4	29.3	22.5	28.4	27.9
Plate beef.....do....	18.6	21.5	22.5	22.6	26.0	26.4	15.9	20.9	20.9	13.6	18.4	18.7	15.3	19.3	19.7
Pork chops.....do....	35.7	37.7	36.3	40.6	41.0	39.9	34.2	35.2	32.9	34.5	37.1	34.8	32.3	34.5	31.9
Bacon, sliced.....do....	46.9	44.1	44.4	49.2	47.7	46.4	41.7	42.1	42.8	48.8	48.3	42.5	48.8	45.0	43.8
Ham, sliced.....do....	49.3	51.4	51.5	58.0	59.9	58.8	47.0	47.5	47.2	50.4	55.2	53.4	53.8	51.3	49.2
Lamb, leg of.....do....	38.8	38.4	38.4	37.0	38.5	37.3	39.2	41.2	40.3	37.5	37.8	31.9	40.0	40.0	38.5
Hens.....do....	35.0	37.7	37.1	38.5	39.7	39.8	37.1	37.5	38.0	29.5	32.1	32.0	31.7	34.3	34.4
Salmon, canned, red ..pound..	37.0	35.5	35.9	34.2	31.0	30.8	35.9	34.9	35.4	35.5	34.8	34.1	34.5	33.8	33.8
Milk, fresh.....quart..	14.0	14.0	14.0	16.0	16.0	16.0	18.0	18.0	18.0	11.3	11.3	11.3	13.0	13.0	13.0
Milk, evaporated ..16-oz. can..	11.1	10.9	11.0	11.1	10.9	10.9	11.8	11.4	11.5	11.8	11.4	11.4	11.2	11.3	11.2
Butter.....pound..	56.4	57.6	58.6	59.0	57.6	59.4	58.9	59.7	60.6	52.6	53.5	54.1	53.0	53.9	54.4
Oleomargarine (all butter substitutes) ..pound..	29.5	28.5	28.6	28.0	28.5	28.5	27.4	26.1	26.1	26.2	26.2	26.8	28.2	28.0	28.0
Cheese.....do....	39.2	38.8	38.9	40.3	41.3	41.3	36.4	35.2	35.0	38.6	37.1	36.4	37.8	36.4	36.5
Lard.....do....	19.5	18.6	18.7	20.6	20.6	20.1	19.4	19.0	18.8	20.3	20.4	20.3	18.8	19.2	18.8
Vegetable lard substitute.....pound..	20.0	19.4	20.3	25.9	25.6	25.7	22.4	21.7	21.7	25.4	25.9	25.2	27.6	27.4	27.6
Eggs, strictly fresh ..dozen..	46.6	46.5	47.6	80.0	68.8	74.5	62.2	57.6	62.9	46.1	40.0	42.8	55.7	44.5	49.8
Eggs, storage.....do....	38.0	40.2	39.5	42.1	42.8	43.2	45.4	39.9	46.4	35.9	37.5	37.8	39.9	39.3	41.2
Bread.....pound..	8.7	8.9	8.9	9.6	8.6	8.6	9.9	9.9	9.9	9.7	9.6	9.6	10.0	10.0	10.0
Flour.....do....	6.6	6.8	6.6	5.4	4.9	4.8	5.5	5.5	5.4	4.5	4.4	4.4	5.2	4.7	4.7
Corn meal.....do....	4.1	4.3	4.3	6.7	6.6	6.6	4.6	4.7	4.7	4.7	4.5	4.6	4.8	4.9	4.9
Rolled oats.....do....	8.8	8.6	8.6	8.6	8.6	8.5	8.5	8.8	8.8	10.1	10.0	9.7	9.3	8.9	8.6
Corn flakes ..8-oz. package..	9.7	9.5	9.6	9.1	8.9	8.9	9.7	9.7	9.7	10.1	10.1	10.1	10.2	9.6	9.9
Wheat cereal ..28-oz. package..	24.6	24.9	24.6	24.0	24.5	24.6	24.8	25.3	24.9	27.8	28.2	27.6	26.3	25.8	25.8
Macaroni.....pound..	10.6	10.8	9.9	21.1	20.9	20.7	19.1	19.0	19.0	21.3	21.2	21.1	18.6	18.8	18.8
Rice.....do....	9.4	8.5	8.5	10.1	9.8	9.7	11.6	11.0	10.7	10.9	11.2	10.9	11.2	10.2	10.0
Beans, navy.....do....	8.7	11.1	11.4	10.2	13.2	13.2	8.4	11.7	12.3	10.0	13.0	13.3	9.1	12.9	12.4
Potatoes.....do....	3.9	3.0	3.1	3.5	2.4	2.5	3.7	2.0	2.1	2.2	1.5	1.5	2.3	1.6	1.6
Onions.....do....	4.5	5.0	5.3	4.9	6.6	6.6	5.3	6.8	7.0	5.3	5.3	6.1	5.5	6.3	7.1
Cabbage.....do....	4.5	4.6	4.7	3.5	4.7	4.7	4.5	4.7	4.7	3.3	3.0	3.6	3.1	3.4	4.2
Beans, baked ..No. 2 can..	11.1	10.6	11.1	11.0	11.3	11.6	9.9	10.5	10.7	13.0	13.1	13.1	11.1	10.2	10.2
Corn, canned.....do....	14.4	15.4	15.6	14.5	14.9	14.7	14.6	14.7	14.7	15.9	16.0	15.7	15.0	14.5	14.8
Peas, canned.....do....	17.6	16.9	17.0	14.9	15.5	15.1	17.3	18.2	17.7	15.4	15.9	15.5	17.8	16.9	17.5
Tomatoes, canned ..No. 2 can..	10.5	10.5	10.9	11.2	11.7	11.7	9.7	9.9	10.1	13.1	13.4	13.1	12.7	12.3	12.4
Sugar.....pound..	6.6	6.3	6.1	6.3	6.2	6.0	6.8	6.9	6.7	7.4	7.2	7.1	8.4	7.5	7.5
Tea.....do....	79.3	81.9	80.9	67.3	68.0	67.2	96.4	95.6	94.7	78.1	77.2	76.7	70.8	65.6	66.0
Coffee.....do....	35.4	35.1	35.0	45.8	45.7	45.4	48.4	50.5	51.0	53.6	53.7	53.6	47.8	49.1	49.4
Prunes.....do....	15.4	14.0	13.8	12.8	13.6	12.9	14.1	13.4	13.7	14.4	14.6	14.5	18.0	15.2	14.9
Raisins.....do....	13.1	10.6	10.2	13.6	12.1	12.0	14.1	12.3	11.8	14.9	13.7	13.3	14.3	13.1	12.1
Bananas.....dozen..	15.8	17.9	17.9	38.5	40.2	39.1	34.0	33.6	32.1	[1] 11.8	[1] 10.2	[1] 11.2	[1] 10.4	[1] 10.1	[1] 9.8
Oranges.....do....	43.8	56.3	51.7	67.4	76.7	67.3	50.9	67.1	59.5	47.1	57.6	56.1	47.6	58.2	54.3

[1] Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	[1] 59.0	[1] 64.4	[1] 62.8	49.3	57.2	55.6	[1] 64.7	[1] 71.4	[1] 67.5	31.0	35.8	36.2
Round steak, do	45.2	51.3	49.0	41.0	48.5	46.9	47.0	54.4	52.8	28.8	33.8	34.6
Rib roast, do	39.0	42.8	42.5	35.6	41.5	40.9	32.2	37.9	36.1	26.2	30.3	29.6
Chuck roast, do	28.7	36.8	35.4	27.8	35.6	34.8	22.8	27.4	27.7	19.9	24.6	25.2
Plate beef, do	14.7	20.5	20.6	15.4	22.2	21.8	18.5	25.7	25.9	15.1	18.6	19.6
Pork chops, do	38.8	40.1	37.8	39.2	40.3	36.3	39.6	41.3	38.0	36.4	36.0	34.6
Bacon, sliced, do	45.1	43.7	42.7	50.7	50.2	48.3	43.1	42.2	42.0	53.4	51.3	51.6
Ham, sliced, do	54.8	59.6	58.4	57.3	61.1	60.5	52.0	55.4	53.8	55.4	55.9	54.7
Lamb, leg of, do	40.8	41.4	40.6	40.1	41.0	40.5	36.9	37.5	37.8	35.9	36.4	35.9
Hens, do	40.0	42.6	41.9	41.6	45.7	46.2	40.2	42.4	41.9	32.2	33.8	35.3
Salmon, canned, red, do	34.7	30.0	29.3	33.1	30.6	30.6	35.4	31.8	30.7	35.0	32.4	32.4
Milk, fresh, quart	13.0	13.0	13.0	15.0	15.0	15.0	13.8	15.0	15.0	12.0	12.0	12.0
Milk, evaporated, 16-oz. can	11.8	11.5	11.3	11.2	11.0	11.0	12.5	12.3	12.3	10.5	10.0	10.1
Butter, pound	61.9	60.7	61.8	59.4	59.1	60.8	57.4	59.5	59.5	55.9	59.1	59.2
Oleomargarine (all butter substitutes), pound	28.9	29.0	29.5	31.4	28.8	28.5	26.4	26.6	26.9	26.3	26.3	26.1
Cheese, do	40.8	42.8	42.8	41.3	41.8	41.9	38.7	39.4	39.5	38.6	38.0	38.5
Lard, do	18.3	19.4	18.6	19.7	19.2	19.2	18.6	19.4	18.7	21.0	19.0	19.6
Vegetable lard substitute, do	25.2	25.1	25.2	27.3	27.8	27.8	26.6	26.2	26.0	28.7	28.4	28.4
Eggs, strictly fresh, dozen	66.5	60.5	66.4	63.4	54.7	60.6	77.9	68.4	74.8	54.9	53.5	54.4
Eggs, storage, do	46.7	45.5	44.7	43.8	45.0	42.6	48.1	49.3	48.6	41.0	42.5	43.0
Bread, pound	9.4	8.6	8.3	8.4	9.1	9.0	10.3	10.1	10.1	9.2	9.3	9.3
Flour, do	5.1	4.8	4.7	5.1	4.8	4.7	5.3	5.1	5.1	4.8	4.7	4.7
Corn meal, do	4.9	5.3	5.2	5.7	6.0	6.0	5.0	5.1	5.3	5.5	5.8	5.6
Rolled oats, do	8.5	8.4	8.3	9.2	9.0	9.1	7.8	8.0	7.8	10.2	10.6	10.4
Corn flakes, 8-oz. package	9.4	8.9	8.9	9.9	9.8	9.8	9.7	9.4	9.4	9.6	9.6	9.6
Wheat cereal, 28-oz. package	24.6	25.4	25.2	24.9	24.6	24.6	25.5	25.6	25.8	27.0	26.8	26.6
Macaroni, pound	20.5	20.5	20.3	23.6	22.6	22.7	24.1	22.7	22.9	18.3	18.5	18.3
Rice, do	11.2	10.3	10.5	11.1	11.0	11.1	12.2	11.1	11.1	10.1	9.9	10.2
Beans, navy, do	9.5	11.5	11.8	8.9	12.7	12.3	9.9	11.8	12.4	9.6	12.3	12.8
Potatoes, do	3.5	2.2	2.2	2.9	2.1	2.0	2.8	1.9	1.8	2.4	2.1	2.1
Onions, do	4.5	6.2	6.4	4.9	6.6	7.1	4.3	6.1	6.3	3.4	4.8	5.0
Cabbage, do	3.2	5.4	4.9	3.9	4.8	4.5	2.7	3.8	3.6	2.9	3.9	3.8
Beans, baked, No. 2 can	10.8	11.2	11.3	12.6	12.7	12.9	14.6	15.0	15.2	12.0	12.3	12.7
Corn, canned, do	14.0	15.3	15.4	16.2	16.2	16.3	13.9	14.1	14.4	18.1	17.9	17.5
Peas, canned, do	14.3	15.5	15.5	17.0	17.0	17.1	17.3	17.5	18.2	17.5	17.0	16.6
Tomatoes, canned, do	11.8	11.6	11.8	11.7	12.1	12.5	12.5	11.5	11.8	[4] 16.4	[4] 15.6	[4] 15.2
Sugar, pound	6.7	6.3	6.2	7.4	7.1	7.0	7.2	6.8	6.6	7.2	6.8	6.6
Tea, do	67.9	71.2	70.4	83.0	82.1	82.3	62.2	62.2	62.4	76.7	77.2	78.0
Coffee, do	40.2	44.3	44.2	57.2	49.3	49.7	49.1	53.4	53.2	51.9	52.9	53.3
Prunes, do	12.7	12.4	12.2	15.6	13.8	14.1	13.0	12.1	12.4	10.2	13.4	13.8
Raisins, do	13.3	11.4	11.2	14.0	12.5	11.9	13.0	12.1	11.2	12.8	11.6	10.6
Bananas, dozen	31.9	29.4	30.2	41.5	38.5	39.6	[2] 11.4	[2] 10.7	[2] 11.0	[2] 13.0	[2] 10.6	[2] 10.5
Oranges, do	52.9	68.5	55.2	51.4	69.6	56.4	64.0	74.5	65.3	57.1	61.9	57.9

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Providence, R. I.			Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	[1] 76.2	[1] 82.7	[1] 80.8	42.2	48.7	48.6	43.9	50.6	47.1	40.5	47.3	46.1
Round steak, do	50.9	58.9	58.2	37.1	43.7	43.5	37.3	44.3	40.7	39.2	46.0	44.3
Rib roast, do	40.7	45.2	44.8	33.5	37.2	36.9	32.4	36.4	35.5	32.2	37.1	36.5
Chuck roast, do	30.5	35.8	36.4	24.2	29.4	30.3	27.6	32.5	31.9	24.0	29.2	29.6
Plate beef, do	19.1	25.0	25.6	17.3	22.1	22.1	15.6	19.6	19.4	16.8	20.5	21.2
Pork chops, do	40.1	42.6	40.7	37.3	38.3	35.9	39.8	40.8	37.8	32.5	34.6	33.2
Bacon, sliced, do	41.9	43.0	41.7	43.8	40.9	40.3	41.1	41.1	39.6	43.3	41.7	41.0
Ham, sliced, do	54.8	58.2	57.3	44.8	46.5	45.7	52.4	56.2	53.0	51.9	53.8	53.2
Lamb, leg of, do	39.8	39.8	39.8	43.8	44.4	44.4	38.4	38.0	36.5	36.4	37.2	35.9
Hens, do	41.0	42.9	42.9	34.0	35.1	35.9	38.7	41.4	40.9	31.0	34.7	35.0
Salmon, canned, red, do	32.9	32.4	32.1	35.5	32.5	33.3	35.6	33.1	31.8	35.8	32.2	32.7
Milk, fresh, quart	15.7	15.7	15.7	14.0	14.0	14.0	13.5	13.5	13.5	13.0	13.0	13.0
Milk, evaporated, 16-oz. can	12.2	11.7	11.9	12.6	12.4	12.3	11.3	11.4	11.5	10.9	10.8	10.8
Butter, pound	53.9	57.2	57.3	59.6	61.6	61.7	55.8	57.5	57.7	58.9	58.9	59.9
Oleomargarine (all butter substitutes), pound	27.4	26.7	26.9	30.7	29.8	29.9	29.9	28.4	28.7	26.7	28.4	27.4
Cheese, do	37.4	39.1	38.4	36.7	37.1	36.9	39.6	39.1	39.9	38.7	37.6	37.4
Lard, do	18.7	19.0	18.6	19.4	18.7	18.6	18.3	18.3	18.1	15.6	16.5	16.0
Vegetable lard substitute, do	26.6	26.6	26.6	25.9	25.8	25.8	26.0	26.3	26.0	25.3	25.3	25.3
Eggs, strictly fresh, dozen	83.1	74.5	78.9	59.5	50.1	54.4	68.7	60.5	69.3	51.4	45.5	52.3
Eggs, storage, do	47.0	46.9	45.3	42.2	43.6	43.6	47.2	46.0	48.3	36.1	38.7	40.9
Bread, pound	9.1	9.0	9.0	9.4	8.9	8.7	9.0	9.1	9.1	9.9	9.4	9.4
Flour, do	5.5	5.3	5.3	5.4	5.4	5.3	5.3	5.2	5.0	5.2	5.0	5.0
Corn meal, do	5.1	5.1	5.0	4.8	4.9	4.9	6.1	6.3	6.3	4.4	4.2	4.3
Rolled oats, do	8.9	8.9	9.0	8.5	8.5	8.6	9.1	9.2	9.2	8.4	8.1	8.1
Corn flakes, 8-oz. package	9.5	9.3	9.4	9.7	9.6	9.6	9.6	9.3	9.3	9.0	9.0	9.0
Wheat cereal, 28-oz. package	25.1	24.8	24.8	25.9	26.0	26.0	25.7	25.3	25.7	24.7	24.6	24.7
Macaroni, pound	23.0	22.5	22.8	20.9	20.2	20.2	20.2	20.4	20.5	20.1	19.8	20.1
Rice, do	10.8	10.2	10.1	11.6	11.4	11.2	10.5	9.0	8.9	10.1	9.8	10.0
Beans, navy, do	9.9	13.1	12.9	9.5	13.0	13.3	9.4	12.4	12.1	8.8	12.3	12.3
Potatoes, do	2.9	1.9	1.8	3.2	2.3	2.4	2.6	1.8	1.5	3.0	1.9	2.0
Onions, do	4.5	6.4	7.0	5.7	7.2	7.2	4.4	5.6	6.0	5.0	5.6	6.5
Cabbage, do	3.7	5.3	4.8	3.7	4.9	4.9	2.2	3.3	3.2	3.4	3.4	3.5
Beans, baked, No. 2 can	10.9	11.1	11.2	10.2	11.1	11.1	10.1	10.4	10.7	10.3	10.4	10.4
Corn, canned, do	17.1	17.4	17.3	15.3	15.3	15.7	16.6	16.4	16.6	15.6	15.3	15.4
Peas, canned, do	18.4	18.3	18.3	18.4	17.9	17.8	17.7	17.7	17.7	15.1	14.6	14.7
Tomatoes, canned, do	12.8	12.9	12.9	10.3	10.7	10.9	13.6	14.4	14.4	11.1	10.7	10.9
Sugar, pound	6.9	6.6	6.4	7.0	6.9	6.8	6.6	6.3	6.2	7.0	6.8	6.8
Tea, do	61.1	60.7	60.4	92.2	91.3	91.9	69.6	72.8	72.8	76.1	74.6	75.7
Coffee, do	49.2	52.7	52.3	45.5	48.0	47.7	45.3	49.1	49.1	45.4	46.8	46.9
Prunes, do	13.5	12.7	13.5	14.7	14.5	15.1	14.2	14.7	14.4	15.2	15.1	15.0
Raisins, do	13.7	13.1	12.7	13.9	12.3	11.8	14.6	12.9	12.7	13.7	11.5	11.3
Bananas, dozen	32.5	32.9	33.6	39.0	35.9	36.4	36.4	27.5	31.5	31.5	32.5	32.3
Oranges, do	60.4	78.4	61.1	47.9	63.8	48.4	53.9	66.6	64.1	50.8	60.3	49.2

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	St. Paul, Minn.			Salt Lake City, Utah			San Francisco, Calif.			Savannah, Ga.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	37.6	42.2	41.9	33.2	39.3	38.7	34.2	41.2	41.2	35.4	40.5	40.5
Round steak, do	32.1	37.4	36.6	30.5	38.0	37.7	32.6	39.9	40.1	29.2	34.1	34.5
Rib roast, do	30.3	33.7	33.7	25.6	30.1	29.6	31.9	37.4	36.9	26.3	32.3	32.3
Chuck roast, do	24.6	28.4	27.9	20.4	26.3	26.2	21.4	26.5	27.2	18.4	23.1	23.4
Plate beef, do	15.1	17.9	17.9	14.6	19.0	19.2	16.9	21.3	21.8	15.7	18.8	19.8
Pork chops, do	32.2	33.1	32.6	37.3	40.2	36.0	43.8	44.4	41.9	32.5	31.8	30.0
Bacon, sliced, do	45.3	44.9	43.6	47.9	45.2	45.4	57.3	56.9	56.5	41.7	40.6	39.6
Ham, sliced, do	47.2	50.6	49.7	56.2	57.7	56.3	63.8	63.5	62.8	44.2	46.0	45.4
Lamb, leg of, do	32.1	31.6	30.6	34.7	37.4	36.8	38.6	40.3	39.7	38.0	40.8	39.0
Hens, do	29.1	32.2	31.9	30.3	34.6	35.2	43.1	41.6	43.5	31.8	31.1	32.0
Salmon, canned, red, do	37.6	37.3	36.1	35.7	33.3	33.2	33.0	29.3	28.9	33.6	33.1	33.1
Milk, fresh, quart	12.0	12.0	12.0	11.0	10.0	10.0	14.0	14.0	14.0	17.0	17.0	17.0
Milk, evaporated, 16-oz. can	12.1	11.9	11.9	10.6	10.2	10.2	10.3	10.0	10.0	11.5	11.4	11.3
Butter, pound	52.0	52.1	53.8	51.8	54.5	54.2	58.7	59.4	58.8	56.7	58.9	59.4
Oleomargarine (all butter substitutes), pound	25.2	24.4	24.1	27.0	25.6	25.5	25.3	25.3	25.3	31.5	30.1	30.3
Cheese, do	37.6	36.8	37.2	30.7	31.3	31.5	39.7	40.5	40.7	37.6	35.4	35.2
Lard, do	18.8	19.5	19.4	21.5	21.5	21.7	23.3	23.2	23.1	19.4	18.1	18.4
Vegetable lard substitute, do	28.7	28.0	28.1	29.1	29.7	29.5	27.8	27.6	27.3	17.9	17.3	16.9
Eggs, strictly fresh, dozen	47.9	41.8	48.0	49.2	47.9	49.9	55.6	52.7	55.5	58.8	57.1	58.6
Eggs, storage, do	37.1	37.0	39.9	-----	40.0	45.0	44.3	43.0	43.8	43.4	44.4	41.7
Bread, pound	9.5	9.3	9.3	9.9	9.6	9.6	9.5	9.1	9.1	10.7	10.6	10.6
Flour, do	5.1	4.8	4.7	4.1	3.7	3.7	5.6	5.4	5.4	6.6	6.5	6.5
Corn meal, do	5.0	5.1	5.1	5.6	5.6	5.9	6.3	7.4	7.3	3.7	3.7	3.7
Rolled oats, do	10.1	10.1	10.1	8.8	8.8	8.6	10.1	10.1	10.1	8.7	8.5	8.4
Corn flakes, 8-oz. package	10.2	10.4	10.1	10.2	10.0	10.2	10.1	9.7	9.7	9.6	9.5	9.8
Wheat cereal, 28-oz. package	26.3	26.3	26.3	25.8	25.5	25.5	25.2	25.2	25.1	24.3	24.3	24.4
Macaroni, pound	18.3	18.6	18.6	19.4	19.6	19.7	16.0	16.3	16.3	18.3	18.0	17.8
Rice, do	10.6	10.5	10.9	9.1	8.6	8.7	10.6	9.5	9.3	9.6	9.1	9.0
Beans, navy, do	9.5	14.0	13.1	8.9	11.2	10.7	9.9	11.1	11.5	9.6	12.8	13.5
Potatoes, do	1.8	1.2	1.2	1.9	1.4	1.6	3.0	2.7	2.5	3.8	3.0	2.9
Onions, do	4.1	5.2	5.7	2.7	4.0	4.4	3.8	4.4	4.9	5.9	6.9	7.3
Cabbage, do	1.8	3.0	2.8	2.7	3.0	2.9	-----	-----	-----	4.5	5.1	5.1
Beans, baked, No. 2 can	13.7	13.6	13.3	12.8	12.4	12.2	12.9	12.6	12.9	12.2	11.8	11.8
Corn, canned, do	14.4	15.1	15.1	14.7	14.1	14.3	18.0	17.3	17.5	14.7	15.2	15.1
Peas, canned, do	15.4	14.9	14.9	15.6	15.1	14.6	17.8	18.0	18.0	16.6	16.0	16.3
Tomatoes, canned, do	14.0	14.1	14.4	[4] 14.1	[4] 13.5	[4] 13.9	[4] 14.9	[4] 14.6	[4] 14.7	9.9	10.0	10.0
Sugar, pound	7.3	7.2	7.0	8.0	7.4	7.2	6.9	6.5	6.3	6.9	6.7	6.6
Tea, do	65.4	67.7	66.7	87.2	86.6	85.4	72.8	71.5	71.5	81.9	79.9	77.6
Coffee, do	52.4	53.6	53.4	54.3	54.7	54.3	52.5	53.9	54.3	45.4	46.3	46.8
Prunes, do	14.8	14.0	14.1	13.4	13.1	13.0	11.3	11.4	11.5	13.5	13.5	13.6
Raisins, do	14.9	14.1	13.9	13.1	12.7	12.1	12.2	10.5	10.3	14.4	12.3	11.8
Bananas, dozen	[3] 11.8	[3] 10.2	[3] 10.3	[3] 12.3	[3] 12.8	[3] 13.1	31.3	27.0	30.2	31.2	30.6	30.0
Oranges, do	58.8	64.6	64.9	54.0	62.1	55.9	53.6	61.0	57.6	40.3	50.9	42.1

[3] Per pound.

[4] No. 2½ can.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

Article	Scranton, Pa.			Seattle, Wash.			Springfield, Ill.			Washington, D. C.		
	Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928		Nov. 15, 1927	1928	
		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15		Oct. 15	Nov. 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak, pound	54.5	64.4	63.5	35.1	42.1	41.5	36.3	43.9	43.9	48.2	56.7	55.6
Round steak, do	46.1	54.1	52.5	31.4	38.0	37.5	35.7	43.9	42.5	41.9	50.0	48.9
Rib roast, do	39.8	46.1	44.8	28.7	34.1	34.1	24.8	32.8	31.5	35.2	41.1	39.5
Chuck roast, do	31.0	38.1	36.2	21.8	27.3	26.9	22.5	29.7	29.1	26.2	34.5	33.4
Plate beef, do	14.3	20.6	20.6	16.5	21.0	20.9	15.1	21.8	21.6	14.8	23.0	22.1
Pork chops, do	40.5	40.2	38.3	38.3	39.4	37.4	31.8	33.1	31.6	37.2	37.3	36.1
Bacon, slice, do	48.6	48.1	48.6	56.4	56.2	56.2	45.8	45.3	43.6	44.2	43.4	41.4
Ham, sliced, do	55.5	60.5	59.3	58.1	60.9	60.7	48.8	52.3	50.9	56.8	59.7	58.8
Lamb, leg of, do	44.1	44.0	43.6	35.0	37.4	37.4	38.3	39.6	39.0	38.8	40.1	39.4
Hens, do	42.7	44.1	44.5	32.2	34.5	35.9	32.0	33.7	33.0	37.9	41.9	41.7
Salmon, canned, red, do	36.1	34.4	34.4	34.8	33.9	33.7	36.0	34.3	34.3	34.4	30.9	31.1
Milk, fresh, quart	12.0	13.0	13.0	12.0	12.0	12.0	14.4	14.4	14.4	15.0	15.0	15.0
Milk, evaporated, 16-oz. can	11.9	12.0	11.9	10.5	10.2	10.3	11.8	12.0	11.9	12.1	11.9	11.9
Butter, pound	56.4	59.5	59.5	55.0	58.9	58.7	54.8	54.5	56.9	59.4	60.8	60.8
Oleomargarine (all butter substitutes), pound	28.4	26.0	26.0	26.1	25.6	25.1	28.2	28.2	28.8	28.4	26.8	27.1
Cheese, do	36.6	39.2	38.8	35.3	35.4	35.7	39.4	37.4	37.2	41.1	40.8	40.8
Lard, do	19.9	20.3	20.1	21.0	20.4	20.3	18.6	19.3	19.3	18.1	19.4	18.1
Vegetable lard substitute, do	26.1	25.6	26.0	27.2	26.8	27.1	27.3	27.8	27.8	23.8	25.1	24.4
Eggs, strictly fresh, dozen	67.0	62.5	68.5	54.5	52.9	53.9	58.2	44.3	49.6	65.8	62.1	64.1
Eggs, storage, do	45.4	48.3	47.0	44.0	44.6	43.3	42.1	.....	43.7	45.2	50.0	49.8
Bread, pound	10.7	10.0	10.0	9.8	9.6	9.6	10.3	10.2	10.0	9.1	8.9	8.9
Flour, do	5.8	5.6	5.5	4.7	4.7	4.7	5.4	4.8	4.8	5.6	5.6	5.5
Corn meal, do	7.6	7.5	7.6	5.7	5.7	5.9	4.9	4.7	4.8	5.1	5.1	5.1
Rolled oats, do	9.8	9.8	9.8	8.6	8.7	8.7	10.2	10.0	10.0	9.2	9.1	9.1
Corn flakes, 8-oz. package	10.1	9.9	9.9	10.1	9.6	9.7	10.2	9.9	10.1	9.4	9.4	9.4
Wheat cereal, 28-oz. package	25.2	25.2	25.6	27.5	26.7	26.7	27.5	28.1	28.8	24.5	24.8	25.0
Macaroni, pound	22.9	22.5	22.5	18.1	17.7	17.9	18.9	19.0	19.0	22.4	22.9	22.0
Rice, do	10.7	10.4	10.4	11.0	10.5	10.6	10.9	10.1	10.6	11.6	10.7	11.0
Beans, navy, do	11.0	12.1	12.1	10.4	12.7	12.5	9.5	13.2	13.0	8.9	12.6	12.9
Potatoes, do	3.0	1.9	1.8	1.9	1.8	1.7	2.6	1.7	1.6	3.4	2.5	2.6
Onions, do	4.8	6.1	5.9	3.2	4.8	5.5	4.2	5.8	6.8	4.7	7.2	6.7
Cabbage, do	3.4	4.5	4.3	3.2	3.7	3.6	3.1	3.1	3.5	3.8	4.8	4.8
Beans, baked, No. 2 can	11.2	11.8	12.0	11.6	11.3	11.4	10.3	11.1	11.1	10.0	10.7	10.8
Corn, canned, do	16.8	17.2	17.3	17.3	18.1	18.2	15.0	15.0	15.0	14.7	15.3	15.2
Peas, canned, do	17.3	17.3	17.8	18.0	18.5	18.3	16.3	15.8	15.9	14.8	15.0	15.0
Tomatoes, canned, do	12.2	12.3	12.7	[4] 16.5	[4] 15.9	[4] 15.8	13.6	14.0	14.0	10.0	10.2	10.5
Sugar, pound	7.1	6.8	6.8	7.1	6.7	6.6	7.8	7.5	7.4	6.8	6.6	6.4
Tea, do	71.5	68.3	68.1	75.2	77.6	78.0	84.6	83.5	83.5	89.1	95.8	95.2
Coffee, do	49.5	50.9	51.2	49.5	52.6	52.3	50.8	51.4	51.7	43.9	47.6	48.1
Prunes, do	15.0	14.1	14.0	12.0	12.6	12.8	14.3	14.2	14.2	14.4	14.7	14.9
Raisins, do	14.4	13.1	12.4	13.3	11.7	11.2	14.4	12.8	12.3	13.6	13.5	13.2
Bananas, dozen	33.0	30.8	30.4	[3] 12.9	[3] 10.7	[3] 11.0	[3] 10.3	[3] 9.7	[3] 9.6	34.2	29.3	32.5
Oranges, do	56.8	73.4	64.9	56.0	59.1	58.8	52.1	71.9	66.4	48.2	71.6	49.7

[3] Per pound.

[4] No. 2½ can.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food [3] in November, 1928, compared with the average cost in the year 1913, in November, 1927, and October, 1928. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[4]

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN NOVEMBER, 1928 COMPARED WITH THE COST IN OCTOBER, 1928, NOVEMBER, 1927, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase, November, 1928, compared with—			City	Percentage increase, November, 1928, compared with—		
	1913	November, 1927	October, 1928		1913	November, 1927	October, 1928
Atlanta	62.3	0.9	0.8	Minneapolis	53.8	1.7	0.5
Baltimore	59.5	[1]2.3	[1]0.8	Mobile		0.8	0.2
Birmingham	60.5	[1]0.9	[1]1.0	Newark	53.3	[1]0.7	0.3
Boston	60.4	[1]0.2	0.8	New Haven	60.9	0.8	0.1
Bridgeport		0.1	0.1	New Orleans	55.7	2.1	[1]0.1
Buffalo	62.7	0.6	0.2	New York	61.5	[1]2.7	0.5
Butte		1.7	0.1	Norfolk		0.5	0.4
Charleston, S. C.	58.4	1.2	[1]0.5	Omaha	48.7	0.9	[1]0.5
Chicago	67.6	1.0	0.1	Peoria		[1]0.7	0.3
Cincinnati	60.8	2.0	0.1	Philadelphia	58.9	[1]1.7	[1]0.4
Cleveland	53.7	[1]0.6	[1]0.3	Pittsburgh	60.7	1.5	0.1
Columbus		1.1	0.6	Portland, Me		1.2	[1]0.1
Dallas	59.9	2.4	1.3	Portland, Oreg	44.7	2.5	0.2
Denver	42.8	2.0	0.9	Providence	61.1	0.5	[1]0.1
Detroit	62.9	0.1	0.5	Richmond	63.6	[1]0.1	[1]0.3
Fall River	57.6	[1]0.6	[1]0.8	Rochester		0.3	[1]0.2
Houston		0.3	0.0	St. Louis	58.5	0.1	0.7
Indianapolis	52.6	0.8	0.8	St. Paul		0.7	0.6
Jacksonville	48.0	[1]0.2	[1]0.7	Salt Lake City	36.2	1.2	0.0
Kansas City	51.6	1.4	0.7	San Francisco	55.5	1.2	0.0
Little Rock	50.7	2.5	1.3	Savannah		0.6	[1]0.2
Los Angeles	49.0	2.4	[1]0.5	Scranton	64.9	0.9	0.0
Louisville	55.1	1.4	[1]0.3	Seattle	49.0	3.4	[1]0.2
Manchester	55.7	[1]0.1	[1]0.2	Springfield, Ill		[1]0.2	0.1
Memphis	51.5	3.8	[1]0.1	Washington	66.9	2.0	[1]1.0
Milwaukee	57.3	[1]0.5	0.1				

[1] Decrease.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of November, 99 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 39 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Birmingham, Boston, Bridgeport, Buffalo, Butte, Charleston, S. C., Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Jacksonville, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Mobile, Newark, New Haven, Omaha, Peoria, Pittsburgh, Portland, Me., Portland, Oreg., Providence, Rochester, St. Louis, St. Paul, San Francisco, Savannah, Scranton, Springfield, Ill., and Washington, D. C.

[3] For list of articles see note 1, p. 166.

[4] The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1927, p. 26.

The following summary shows the promptness with which the merchants responded in November, 1928:

RETAIL PRICE REPORTS RECEIVED FOR NOVEMBER, 1928

Item	United States	Geographical division				
		North Atlantic	South Atlantic	North Central	South Central	Western
Percentage of reports received	99.0	99.0	98.0	99.4	98.0	98.0
Number of cities in each section from which every report was received	39	11	6	12	5	5

Retail Prices of Coal in the United States [a]

THE following table shows the average retail prices of coal on November 15, 1927, and October 15 and November 15, 1928, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928

City, and kind of coal	1927	1928	
	Nov. 15	Oct. 15	Nov. 15
United States:			
Pennsylvania anthracite—			
Stove—			
Average price	$15.44	$16.26	$15.38
Index (1913=100)	199.9	197.6	199.1
Chestnut—			
Average price	$15.07	$14.98	$15.06
Index (1913=100)	190.5	189.3	190.3
Bituminous—			
Average price	$9.32	$8.96	$9.07
Index (1913=100)	171.5	164.8	166.9
Atlanta, Ga.:			
Bituminous, prepared sizes	$8.37	$8.02	$7.97
Baltimore, Md.:			
Pennsylvania anthracite—			
Stove	[1]16.00	[1]16.00	[1]16.00
Chestnut	[1]15.25	[1]15.50	[1]15.50
Bituminous, run of mine, high volatile	8.11	8.00	8.00
Birmingham, Ala.:			
Bituminous, prepared sizes	7.81	7.56	7.64
Boston, Mass.:			
Pennsylvania anchracite—			
Stove	16.25	16.00	16.25
Chestnut	16.00	15.75	16.00
Bridgeport, Conn.:			
Pennsylvania anthracite—			
Stove	15.00	15.50	15.50
Chestnut	15.00	15.50	15.50
Buffalo, N. Y.:			
Pennsylvania anthracite—			
Stove	13.97	13.93	14.02
Chestnut	13.57	13.56	13.54
Butte, Mont.:			
Bituminous, prepared sizes	$11.03	$10.92	$10.93
Charleston, S. C.:			
Bituminous, prepared sizes	11.00	9.67	9.67
Chicago, Ill.:			
Pennsylvania anthracite—			
Stove	16.95	16.75	16.90
Chestnut	16.46	16.45	16.45
Bituminous, prepared sizes—			
High volatile	8.78	8.53	8.53
Low volatile	11.85	11.85	11.85
Run of mine—			
Low volatile	8.25	8.25	8.25
Cincinnati, Ohio:			
Bituminous, prepared sizes—			
High volatile	6.50	5.50	5.57
Low volatile	7.85	7.69	7.79
Cleveland, Ohio:			
Pennsylvania anthracite—			
Stove	15.20	15.40	15.35
Chestnut	14.70	15.02	14.97
Bituminous, prepared sizes—			
High volatile	7.88	7.28	7.26
Low volatile	9.81	9.81	10.03
Columbus, Ohio:			
Bituminous, prepared sizes—			
High volatile	6.91	5.93	6.11
Low volatile	8.38	7.94	8.25
Dallas, Tex.:			
Arkansas anthracite—			
Egg	15.50	15.50	15.75
Bituminous, prepared sizes	12.70	13.08	13.08

[1] Per ton of 2,240 pounds.

[a] Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

City, and kind of coal	1927	1928	
	Nov. 15	Oct. 15	Nov. 15
Denver, Colo.:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	$16.10	$15.95	$16.00
Stove, 3 and 5 mixed	16.10	15.95	16.00
Bituminous, prepared sizes	10.61	10.57	10.57
Detroit, Mich.:			
Pennsylvania anthracite—			
Stove	16.00	16.00	16.00
Chestnut	15.50	15.50	15.50
Bituminous, prepared sizes—			
High volatile	8.58	8.31	8.27
Low volatile	10.28	9.91	10.16
Run of mine—			
Low volatile	8.00	7.67	8.00
Fall River, Mass.:			
Pennsylvania anthracite—			
Stove	16.75	16.50	16.50
Chestnut	16.25	16.25	16.25
Houston, Tex.:			
Bituminous, prepared sizes	12.20	12.00	13.00
Indianapolis, Ind.:			
Bituminous—			
Prepared sizes—			
High volatile	6.71	6.38	6.46
Low volatile	9.11	9.00	9.00
Run of mine—			
Low volatile	7.38	7.00	7.00
Jacksonville, Fla.:			
Bituminous, prepared sizes	14.00	13.00	12.00
Kansas City, Mo.:			
Arkansas anthracite—			
Furnace	14.10	12.60	12.70
Stove No. 4	15.33	14.17	14.33
Bituminous, prepared sizes	7.81	7.23	7.28
Little Rock, Ark.:			
Arkansas anthracite—			
Egg	13.50	13.50	13.50
Bituminous, prepared sizes	10.43	9.80	9.80
Los Angeles, Calif.:			
Bituminous, prepared sizes	16.50	16.25	16.25
Louisville, Ky.:			
Bituminous, prepared sizes—			
High volatile	7.14	6.62	6.65
Low volatile	9.50	9.25	9.25
Manchester, N. H.:			
Pennsylvania anthracite—			
Stove	17.50	17.25	17.25
Chestnut	17.25	17.00	17.00
Memphis, Tenn.:			
Bituminous, prepared sizes	8.30	6.43	7.41
Milwaukee, Wis.:			
Pennsylvania anthracite—			
Stove	16.65	16.20	16.30
Chestnut	16.20	15.90	15.90
Bituminous, prepared sizes—			
High volatile	8.05	7.80	7.80
Low volatile	11.12	10.63	11.08
Minneapolis, Minn.:			
Pennsylvania anthracite—			
Stove	18.15	18.20	18.28
Chestnut	17.70	17.90	17.90
Bituminous, prepared sizes—			
High volatile	10.94	10.94	10.94
Low volatile	13.75	13.53	13.50
Mobile, Ala.:			
Bituminous, prepared sizes	9.46	9.69	9.69
Newark, N. J.:			
Pennsylvania anthracite—			
Stove	14.00	14.00	14.00
Chestnut	13.50	13.50	13.50
New Haven, Conn.:			
Pennsylvania anthracite—			
Stove	15.10	14.90	14.90
Chestnut	15.10	14.80	14.90
New Orleans, La.:			
Bituminous, prepared sizes	$10.29	$10.21	$10.21
New York, N. Y.:			
Pennsylvania anthracite—			
Stove	14.75	14.75	14.75
Chestnut	14.46	14.25	14.25
Norfolk, Va.:			
Pennsylvania anthracite—			
Stove	15.00	14.00	15.00
Chestnut	15.00	14.00	15.00
Bituminous—			
Prepared sizes—			
High volatile	7.88	7.81	7.88
Low volatile	10.50	9.50	10.50
Run of mine—			
Low volatile	7.00	7.00	7.00
Omaha, Nebr.:			
Bituminous, prepared sizes	10.21	9.58	9.36
Peoria, Ill.:			
Bituminous, prepared sizes	7.16	6.81	6.88
Philadelphia, Pa.:			
Pennsylvania anthracite—			
Stove	[1] 15.04	[1] 14.29	[1] 15.57
Chestnut	[1] 14.54	[1] 13.96	[1] 14.11
Pittsburgh, Pa.:			
Pennsylvania anthracite—			
Chestnut	14.88	14.88	15.00
Bituminous, prepared sizes	5.69	5.31	5.30
Portland, Me.:			
Pennsylvania anthracite—			
Stove	16.80	16.80	16.80
Chestnut	16.68	16.80	16.80
Portland, Oreg.:			
Bituminous, prepared sizes	13.52	13.13	13.15
Providence, R. I.:			
Pennsylvania anthracite—			
Stove	[2] 16.25	[2] 16.00	[2] 16.00
Chestnut	[2] 15.94	[2] 16.00	[2] 16.00
Richmond, Va.:			
Pennsylvania anthracite—			
Stove	15.50	14.33	15.00
Chestnut	15.50	14.33	15.00
Bituminous—			
Prepared sizes—			
High volatile	8.88	8.13	8.63
Low volatile	10.29	9.17	9.78
Run of mine—			
Low volatile	8.00	7.25	7.50
Rochester, N. Y.:			
Pennsylvania anthracite—			
Stove	14.60	14.60	14.69
Chestnut	14.15	14.25	14.19
St. Louis, Mo.:			
Pennsylvania anthracite—			
Stove	16.90	16.65	16.65
Chestnut	16.45	16.40	16.40
Bituminous, prepared sizes	7.29	6.11	6.21
St. Paul, Minn.:			
Pennsylvania anthracite—			
Stove	18.15	18.20	18.30
Chestnut	17.70	17.90	17.90
Bituminous, prepared sizes—			
High volatile	10.71	10.68	10.71
Low volatile	13.75	13.50	13.50
Salt Lake City, Utah:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	18.00	18.00	18.00
Stove, 3 and 5 mixed	18.00	18.00	18.00
Bituminous, prepared sizes	8.34	8.42	8.24
San Francisco, Calif.:			
New Mexico anthracite—			
Cerillos egg	25.50	26.00	26.00
Colorado anthracite—			
Egg	25.00	25.50	25.50
Bituminous, prepared sizes	16.63	17.13	17.25

[1] Per ton of 2,240 pounds.

[2] The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON NOVEMBER 15, 1927, AND OCTOBER 15 AND NOVEMBER 15, 1928—Continued

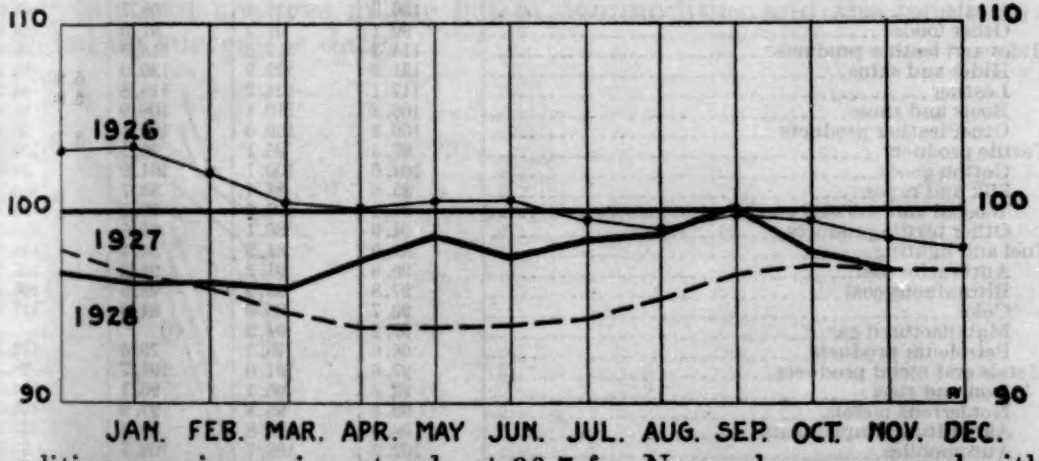
City, and kind of coal	1927	1928	
	Nov. 15	Oct. 15	Nov. 15
Savannah, Ga.:			
Bituminous, prepared sizes	[3] $11.25	[3] $10.62	[3] $10.62
Scranton, Pa.:			
Pennsylvania anthracite—			
Stove	10.75	10.53	10.53
Chestnut	10.50	10.33	10.33
Seattle, Wash.:			
Bituminous, prepared sizes	10.06	10.48	10.48
Springfield, Ill.:			
Bituminous, prepared sizes	4.44	4.24	4.24
Washington, D. C.:			
Pennsylvania anthracite—			
Stove	[1] $15.51	[1] $15.33	[1] $15.63
Chestnut	[1] 14.99	[1] 14.96	[1] 15.13
Bituminous—			
Prepared sizes—			
High volatile	[1] 9.00	[1] 8.63	[1] 9.25
Low volatile	[1] 11.08	[1] 10.92	[1] 11.42
Run of mine—			
Mixed	[1] 7.88	[1] 7.60	[1] 7.63

[1] Per ton of 2,240 pounds.
[3] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

Index Numbers of Wholesale Prices in November, 1928

FURTHER reduction in the general level of wholesale prices is shown for November by information collected in representative markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, computed on prices in the year 1926 as the base and including 550 commodities or price series, stands at 96.7 for November compared with 97.8 for October, a decrease of over 1 per cent. The November index number exactly coincides with the index number for November, 1927.

TREND OF WHOLESALE PRICES
[1926=100]



Foods led in price declines from the previous month, due to decreases in practically all pork products, fresh beef, flour, corn meal, oranges, lemons, and sugar. Butter and eggs, on the contrary, averaged higher than in October. Farm products as a whole also were lower, with weakening prices for most grains, livestock and poultry, clover and timothy hay, and tobacco.

Hides and leather products likewise showed an appreciable price decrease, while minor decreases were recorded for the groups of fuel and lighting materials, house-furnishing goods, and miscellaneous commodities.

No change in the general price level is shown for the group of textile products, while small increases took place among metals and metal products, building materials, and chemicals and drugs.

Of the 550 commodities or price series for which comparable information for October and November was collected, increases were

shown in 140 instances and decreases in 148 instances. In 262 instances no change is price was reported.

Comparing prices in November with those of a year ago, as measured by changes in the index numbers, it is seen that appreciable increases took place among metals and metal products and building materials and smaller increases among hides and leather products and fuel and lighting materials. On the other hand, farm products, foods, textile products, chemicals and drugs, and house-furnishing goods were somewhat lower, while a considerable decrease took place in the group of miscellaneous commodities.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100]

Groups and subgroups	November, 1927	October, 1928	November, 1928	Purchasing power of the 1926 dollar in November, 1928
				Cents
All commodities	96.7	97.8	96.7	103.4
Farm products	104.3	103.5	101.6	98.4
Grains	99.6	96.6	94.6	105.7
Livestock and poultry	100.8	106.4	100.6	99.4
Other farm products	108.3	103 9	104.8	95.4
Foods	101.5	102.3	100.1	99.9
Butter, cheese, and milk	108.3	108.4	109.7	91.2
Meats	100.9	116.4	108.7	92.0
Other foods	99.1	91.2	91.0	109.9
Hides and leather products	114.3	117.5	115.5	86.6
Hides and skins	131.6	129.9	130.0	76.9
Leather	117.1	124.2	118.8	84.2
Boots and shoes	106.3	110.4	108.9	91.8
Other leather products	109.2	109.0	108.4	92.3
Textile products	97.5	96.1	96.1	104.1
Cotton goods	104.6	100.7	101.2	98.8
Silk and rayon	83.6	84.4	83.7	119.5
Woolen and worsted goods	98.1	100.0	99.9	100.1
Other textile products	94.9	86.1	85.8	116.6
Fuel and lighting	82.9	84.9	84.4	118.5
Anthracite coal	96.9	91.2	91.2	109.6
Bituminous coal	97.8	93.9	93.6	106.8
Coke	92.7	85.0	84.9	117.8
Manufactured gas	97.2	94.3	(1)	
Petroleum products	66.6	76.3	75.5	132.5
Metals and metal products	97.0	101.0	101.7	98.3
Iron and steel	93.5	95.1	96.1	104.1
Nonferrous metals	90.3	95.8	97.9	102.1
Agricultural implements	98.9	98.8	98.8	101.2
Automobiles	102.2	108.7	108.7	92.0
Other metal products	100.7	96.9	96.9	103.2
Building materials	90.2	95.0	96.0	104.2
Lumber	89.2	91.7	92.7	107.9
Brick	91.3	92.4	92.3	108.3
Cement	96.5	94.6	94.6	105.7
Structural steel	89.4	94.5	97.0	103.1
Paint materials	85.7	87.1	88.2	113.4
Other building materials	91.2	104.3	105.7	94.6
Chemicals and drugs	97.4	95.6	96.0	104.2
Chemicals	102.3	101.8	102.3	97.8
Drugs and pharmaceuticals	85.2	70.7	70.9	141.0
Fertilizer materials	94.9	93.8	94.1	106.3
Fertilizers	92.9	97.5	97.6	102.5
House-furnishing goods	98.9	96.5	96.4	103.7
Furniture	97.2	95.5	95.3	104.9
Furnishings	100.0	97.1	97.1	103.0
Miscellaneous	88.3	80.3	80.0	125.0
Cattle feed	122.4	128.2	137.8	72.6
Paper and pulp	91.3	89.0	88.8	112.6
Rubber	77.8	38.8	37.9	263.9
Automobile tires	71.2	60.9	58.1	172.1
Other miscellaneous	99.1	98.5	98.5	101.5
Raw materials	99.0	97.4	96.2	104.0
Semimanufactured articles	97.0	96.9	96.9	103.2
Finished products	95.3	98.5	97.2	102.9
Nonagricultural commodities	94.6	96.4	95.4	104.8

[1] Data not yet available.

Comparison of Retail-Price Changes in the United States and in Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced, in most cases, to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers of retail prices compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. Some of the countries shown in the table now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto, as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results, which are designed merely to show price trends and not actual differences in the several countries, should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included on successive dates.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

Country	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France (except Paris)	France (Paris)	Germany
Number of localities	51	60	59	Entire country	100	21	320	1	71
Commodities included	43 foods	29 foods	56 (foods, etc.)	29 foods	Foods	36 foods	13 (11 foods)	13 (11 foods)	Foods
Computing agency	Bureau of Labor Statistics	Department of Labor	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor	Federal Statistical Bureau
Base=100	July, 1914	July, 1914	April, 1914	July, 1914	July, 1914	January-June, 1914	August, 1914	July, 1914	October, 1913-July, 1914
1924									
Jan	146	145	480	836	194	1089	----------	376	127
Feb	144	145	495	838	----------	1070	400	384	117
Mar	141	143	510	830	----------	1067	----------	392	120
Apr	138	137	498	829	----------	1035	----------	380	123
May	138	133	485	825	----------	1037	393	378	126
June	139	133	492	833	----------	1040	----------	370	120
July	140	134	493	837	200	1052	----------	360	126
Aug	141	137	498	842	----------	1125	400	366	122
Sept	144	139	503	853	----------	1125	----------	374	125
Oct	145	139	513	877	----------	1156	----------	383	134
Nov	147	141	520	889	----------	1160	426	396	135
Dec	148	143	521	891	----------	1160	----------	404	135
1925									
Jan	151	145	521	899	215	1130	----------	408	137
Feb	148	147	517	911	----------	1120	440	410	145
Mar	148	145	511	904	----------	1152	----------	415	146
Apr	148	142	506	901	----------	1137	----------	409	144
May	148	141	502	894	----------	1097	433	418	141
June	152	141	505	914	----------	1101	----------	422	146
July	156	141	509	916	210	1145	----------	421	154
Aug	157	146	517	894	----------	1222	451	423	154
Sept	156	146	525	884	----------	1187	----------	431	153
Oct	158	147	533	875	----------	1165	----------	433	151
Nov	164	151	534	863	----------	1164	471	444	147
Dec	162	156	534	866	----------	1138	----------	463	146
1926									
Jan	161	157	527	854	177	1090	----------	480	143
Feb	158	155	526	845	----------	1106	503	495	142
Mar	156	154	521	832	----------	1100	----------	497	141
Apr	159	153	529	832	----------	1085	----------	503	142
May	158	152	558	837	----------	1078	523	522	142
June	156	149	579	861	----------	1090	----------	544	143
July	154	149	637	876	159	1105	----------	574	145
Aug	152	150	681	878	----------	1153	610	587	146
Sept	155	147	684	878	----------	1137	----------	590	145
Oct	157	147	705	888	----------	1126	----------	624	145
Nov	158	148	730	902	----------	1114	647	628	148
Dec	158	151	741	912	----------	1110	----------	599	150
1927									
Jan	156	153	755	914	156	1092	----------	592	151
Feb	153	151	770	914	----------	1095	586	585	152
Mar	150	149	771	915	----------	1086	----------	581	151
Apr	150	146	774	923	152	1069	----------	580	150
May	152	145	776	931	----------	1058	572	589	151
June	155	146	785	949	----------	1072	----------	580	153
July	150	147	790	962	153	1102	----------	557	157
Aug	149	147	787	919	----------	1159	553	539	150
Sept	151	146	794	910	----------	1146	----------	532	151
Oct	153	148	804	907	152	1156	----------	520	152
Nov	153	149	809	905	----------	1175	526	500	152
Dec	153	151	812	913	----------	1171	----------	523	153
1928									
Jan	152	151	813	913	152	1126	----------	530	152
Feb	148	149	811	910	----------	1112	522	522	151
Mar	148	147	806	901	----------	1123	----------	524	151
Apr	149	147	807	905	152	1119	----------	532	151
May	150	145	805	908	----------	1113	530	546	151
June	149	144	811	928	----------	1126	----------	557	152
July	150	145	811	943	153	1155	----------	[1] 111	154
Aug	151	149	819	943	----------	1191	[1] 109	[1] 110	156
Sept	154	149	825	928	----------	1174	----------	[1] 111	153

[1] In gold.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES—Continued

Country	Italy	Netherlands	Norway	Sweden	Switzerland	United Kingdom	South Africa	India (Bombay)	Australia	New Zealand
Number of localities	447	6	31	49	33	630	9	1	30	25
Commodities included	20 foods and charcoal	29 (27 foods)	Foods	50 (43 foods, 7 fuel and light)	Foods	21 foods	24 foods	17 foods	46 foods and groceries	59 foods
Computing agency	Ministry of National Economy	Central Bureau of Statistics	Central Bureau of Statistics	Social Board	Labor Office (revised)	Ministry of Labor	Office of Census and Statistics	Labor Office (revised)	Bureau of Census and Statistics	Census and Statistics Office
Base=100	1913	January-June, 1914	July, 1914	July, 1914	July, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
1924										
Jan.	527	150	230	163	173	175	120	154	155	150
Feb.	529	151	234	162	172	177	122	151	153	149
Mar.	523	152	241	162	171	176	122	147	152	150
Apr.	527	152	240	159	169	167	122	143	150	150
May	530	151	241	159	169	163	122	143	151	150
June	543	151	240	158	170	160	120	147	149	150
July	538	150	248	159	170	162	117	151	148	148
Aug.	534	150	257	163	170	164	117	156	147	146
Sept.	538	152	261	165	170	166	117	156	146	145
Oct.	556	154	264	172	174	172	120	156	146	145
Nov.	583	156	269	172	175	179	122	157	147	148
Dec.	601	157	274	172	175	180	121	156	148	150
1925										
Jan.	609	156	277	170	172	178	120	152	148	147
Feb.	609	157	283	170	172	176	120	152	149	146
Mar.	610	157	284	171	171	176	121	155	151	149
Apr.	606	155	276	170	169	170	124	153	152	149
May	600	154	265	169	168	167	123	151	154	150
June	602	152	261	169	169	166	122	149	155	149
July	605	152	260	169	169	167	120	152	156	151
Aug.	619	152	254	170	169	168	119	147	156	152
Sept.	642	152	241	168	170	170	118	146	156	153
Oct.	645	149	228	166	168	172	119	148	157	155
Nov.	652	149	223	165	168	172	117	149	156	156
Dec.	653	148	221	164	167	174	116	151	155	154
1926										
Jan.	658	148	216	162	165	171	116	151	155	154
Feb.	649	147	212	160	163	168	117	150	154	153
Mar.	636	147	205	159	161	165	118	151	159	152
Apr.	633	146	198	158	161	159	119	150	163	151
May	643	146	195	157	159	158	119	150	163	151
June	647	146	194	157	159	158	118	152	162	151
July	645	146	198	156	159	161	117	155	159	149
Aug.	648	146	196	156	157	161	117	153	157	150
Sept.	656	149	193	157	158	162	117	152	155	148
Oct.	662	148	191	157	160	163	120	153	153	147
Nov.	655	148	186	158	159	169	119	152	155	146
Dec.	641	146	184	157	159	169	117	154	158	149
1927										
Jan.	629	147	180	156	158	167	116	155	158	148
Feb.	615	146	177	153	157	164	117	152	153	146
Mar.	610	146	173	151	156	162	118	152	151	146
Apr.	606	145	169	151	156	155	119	151	151	145
May	599	145	169	150	156	154	121	150	152	145
June	558	145	172	151	157	154	120	151	153	144
July	540	144	175	151	157	159	119	154	152	144
Aug.	532	143	175	152	157	156	118	155	155	143
Sept.	525	143	174	156	159	157	117	151	157	143
Oct.	530	146	173	155	159	161	119	148	150	143
Nov.	534	148	171	155	161	163	119	147	157	144
Dec.	534	148	171	154	160	163	119	149	155	146
1928										
Jan.	531	148	170	153	159	162	119	151	154	147
Feb.	529	149	170	153	158	159	118	146	152	145
Mar.	522	150	171	154	157	155	118	142	153	145
Apr.	522	150	171	154	156	155	119	140	154	144
May	529	150	172	155	156	154	120	144	154	147
June	533	150	171	157	156	156	118	142	154	147
July	516	150	173	157	157	157	116	143	152	146
Aug.	525	150	170	156	157	156	115	142	150	146
Sept.		148	164	155	156	156	115	141	150	147

IMMIGRATION AND EMIGRATION

Statistics of Immigration for October, 1928

By J. J. Kunna, Chief Statistician United States Bureau of Immigration

DURING the month of October, 1928, 29,917 immigrant aliens were admitted to the United States, an increase of 600 over the preceding month. The number of emigrant aliens leaving the country in October to make their homes abroad again was 7,479, or 614 less than for the previous month.

The latest figures show an increase in the outward movement of American citizens, practically all of whom were going abroad for a short visit. During the four months from July to October last, 195,534 United States citizens left for foreign shores, as against 172,869 for the corresponding period of last year. The major portion of these were tourists leaving via the port of New York for European points.

The number of immigrant aliens entering this country from July 1 to October 31, 1928, was 104,545, an average of 26,136 a month. Nearly 90 per cent of the arrivals by water came in at New York, 52,486 immigrants being admitted at that port during the four months and 6,962 at the other seaports, while 45,097 entered over the international land borders, 26,086 from Canada and 19,011 from Mexico. Over one-half, or 54,311, of the immigrants for the same four months settled in the North Atlantic States, New York, with 29,524, receiving by far the largest number. Texas was second in the list, 13,351 immigrants giving that State as their intended future permanent residence, the major portion of whom were Mexicans coming in over the southern land border from Mexico.

About one out of every six of the immigrant aliens admitted during the four months from July to October last was a skilled worker and about one out of every nine gave his occupation as that of common laborer. The number recorded as skilled workers was 16,618 and as common laborers 11,478, while 10,657 were servants, 5,424 were in the professional or commercial class, 3,149 were farmers, 7,360 were farm laborers, and 2,226 of the miscellaneous classes. Immigrants listed as having no occupation, being mainly women and children, numbered 47,633.

The immigrants for the said four months were about equally divided by sex, 52,620 males and 51,925 females; 18,786 were children under 16 years of age and 25,555 were from 16 to 21 years, while the largest group, or 50,883, ranged in age from 22 to 44 years and 9,321 were 45 years of age and over. As to the conjugal condition of these immigrants, 67,144 were recorded as single, 33,765 as married, and 3,636 as widowed or divorced.

The number of aliens of all classes admitted in October, 1928, was 54,714, making a total of 190,335 for the four months from July to October, 1928, a decrease as compared with the corresponding months of the preceding year when 196,738 aliens entered the country.

Of the 190,335 aliens admitted during the first four months of the present fiscal year, 48,137 came in under the immigration act of 1924 as immigrants charged to the quota, 49,019 as returning residents, and 43,353 as natives of nonquota countries, principally Canada and Mexico. Visitors for business or pleasure numbered 25,060, while 8,925 were passing through the country on their way elsewhere. The number coming in under the act as husbands, wives, or unmarried children of American citizens was 10,623; as Government officials, their families, attendants, servants, and employees, 2,473; and as students, 1,246, the remaining 1,499 were aliens to carry on trade under existing treaty, ministers, professors, etc.

The number of aliens deported during the four months from July to October, 1928, under warrant proceedings, was 3,676, a monthly average of 919. This is a small drop from the 970 monthly average number of undesirable aliens deported during the same months of the previous year.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1 TO OCTOBER 31, 1928

Period	Inward						Outward					
	Aliens admitted			United States citizens arrived	Total	Aliens debarred from entering [1]	Aliens departed			United States citizens departed	Total	Aliens deported after landing [2]
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
1928												
July	20,682	15,976	36,658	32,974	69,632	1,286	7,804	20,249	28,053	68,463	96,516	768
August	24,629	18,620	43,249	63,191	106,440	1,412	6,488	15,960	22,448	50,323	72,771	1,186
September	29,317	26,397	55,714	80,233	135,947	1,364	8,093	17,231	25,324	42,105	67,429	915
October	29,917	24,797	54,714	49,831	104,545	1,798	7,479	16,693	24,172	34,643	58,815	807
Total 4 mos.	104,545	85,790	190,335	226,229	416,564	5,860	29,864	70,133	99,997	195,534	295,531	3,676

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

PUBLICATIONS RELATING TO LABOR

OFFICIAL—UNITED STATES

IOWA.—Workmen's Compensation Service. *Eighth biennial report, for the period ending June 30, 1928, and report of decisions by the department and State courts. Des Moines, 1928. 159 pp.*

A discussion of this report is given on page 88 of this issue.

KANSAS.—Public Service Commission. Labor Department. *Annual report, for the year ending December 31, 1927. Topeka, 1928. 88 pp.*

Largely devoted to detailed report of factory and workshop inspection. There is a section on mine inspection and on the activities of the State free employment service. The statistical division reports for the 6-month period ending June 30, 1927, a total of 34 fatal accidents and 51 permanent and 4,262 temporary disability cases. Handling heavy objects caused the greatest number of temporary disability accidents (14.9 per cent) and falling objects caused the greatest number of fatalities (23.5 per cent). Most of the industrial accidents of all classes occurred in connection with the operation of steam railroads, the total number being 720 or 16.6 per cent.

NEW YORK.—Department of Labor. *Special bulletin: An analysis of three hundred accidents in plants manufacturing or preparing food products, with suggestions as to safe practice and suitable machine guards, prepared by Bureau of Industrial Hygiene. Albany, 1928. 59 pp., illus.*

The scope of this report is suggested by the title. The 300 accidents analyzed occurred in 300 different plants employing 26,946 workers. Each accident is taken up separately and its occurrence described, with suggestions, where pertinent, as to how it might have been prevented. Most of the accidents were due to machines or tools, 222 being thus caused, with food choppers leading the list of specified machines. Leading causes of accidents other than machines were "slipping and falling," with 19; and "struck by object," with 15; while 10 of the injuries in the group of 78 accidents became infectious.

RHODE ISLAND.—Department of Labor. *Report made to the General Assembly, for the year 1927. Providence, 1928. 37 pp.*

Certain data from this report are given on page 89 of this issue.

WISCONSIN.—Industrial Commission. *Building code, State of Wisconsin.* (*Reprinted, 1927.*) *Madison, 1927. 142 pp.; diagrams.*

—— —— *General orders on safety in construction.* (*Reprinted, 1928.*) *Madison, 1928. 32 pp.; diagrams.*

UNITED STATES.—Board of Mediation. *Annual report, for the fiscal year ended June 30, 1928. Washington, 1928. 60 pp.*

Reviewed on page 115 of this issue.

—— Department of Agriculture. *Farmers' bulletin No. 1577: Harvesting grain sorghums. Washington, 1928. 16 pp., illus.*

Information on the labor requirements and costs of harvesting grain sorghums, taken from this pamphlet, is given on page 49.

—— —— *Report of the Secretary, 1928. Washington, 1928. 123 pp.*

A general summary of the agricultural cooperative movement, taken from this report, is given on page 97 of this issue.

—— Department of Commerce. *Sixteenth annual report of the Secretary, 1928. Washington, 1928. liii, 350 pp.*

Data on output per worker, taken from this report, are published on page 54 of this issue.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Coal in 1926, by F. G. Tryon, O. E. Kiessling, and L. Mann. Washington, 1928. (Mineral resources of the United States, 1926, Part II, pp. 419–585.) Charts.*

A general review of the coal industry in 1926 with comparative figures for earlier years in many cases. The information includes data on production and distribution, value of coal produced, men employed, days worked by the mines, length of the working-day, and industrial disputes.

—— —— —— *Eighteenth annual report, for the fiscal year ended June 30, 1928. Washington, 1928. 57 pp.; charts.*

The annual report of the director of the Bureau of Mines reviews the work accomplished during the year in the promotion of safety in mines, including the rescue and first-aid work, and gives a statement of the studies carried out by the health and safety divisions.

—— —— Bureau of the Census. *Census monograph VIII: The growth of manufactures, 1899 to 1923; a study of indexes of increase in the volume of manufactured products, by Edmund E. Day and Woodlief Thomas. Washington, 1928. 205 pp.; charts.*

Data from this report are published on page 57 of this issue.

—— Department of Labor. *Sixteenth annual report of the Secretary of Labor, for fiscal year ended June 30, 1928. Washington, 1928. 181 pp.*

The recommendations in the document are reviewed on page — of this issue.

—— —— Bureau of Immigration. *Annual report, fiscal year ended June 30, 1928. Washington, 1928. 238 pp.*

—— —— Bureau of Labor Statistics. *Annual report, fiscal year ended June 30, 1928. Washington, 1928. 68 pp.*

—— —— —— *Bulletin No. 461: Labor organizations in Chile, by Moisés Poblete Troncoso. Washington, 1928. 41 pp.*

—— —— —— *Bulletin No. 465: Beneficial activities of American trade-unions. Washington, 1928. 216 pp., illus.*

Reviewed on page 26 of this issue.

—— —— Bureau of Naturalization. *Annual report, fiscal year ended June 30, 1928. Washington, 1928. 36 pp.*

—— —— Children's Bureau. *Sixteenth annual report, fiscal year ended June 30, 1928. Washington, 1928 53 pp.*

—— —— Women's Bureau. *Tenth annual report, fiscal year ended June 30, 1928. Washington, 1928. 19 pp.*

Official—Foreign Countries

AUSTRALIA (QUEENSLAND).—Department of Labor. *Report of the director of labor and chief inspector of factories and shops for year ended June 30, 1928. Brisbane, 1928. 50 pp.*

Contains data on operations of State labor exchanges and a list of unions registered under the trade-union act, as of June 30, 1928; number of factories and number of employees, by sex, in different industries on January 31, 1928; and rates of wages of adults, by occupation or industry, under industrial awards, 1923 to March 31, 1928.

—— (TASMANIA).—Industrial Department. *Thirteenth annual report, for 1927–28, on factories, wages boards, shops, etc. Hobart, 1928. 25 pp.*

Contains statistics on number of factories in different industries and number of employees, by age and sex, with hours worked per week, January 1 to June 30, 1928; and rates of wages paid and hours worked in different occupations, July 1, 1927, to June 30, 1928, under the wages boards act.

BELGIUM.—Ministère de l'Industrie, du Travail et de la Prévoyance Sociale. Office du Travail. *Statistique des accidents du travail, année 1922. Brussels, 1927. 2 vols.; 635 and 587 pp.*

This report of the industrial accidents in Belgium in the year 1922 covers about 950,000 workers in 63,190 enterprises. There was a total of 146,515 accidents, of which 68,410, or 47 per cent, caused disability of less than eight days, while 74,413 accidents caused temporary disability of eight days and over, 3,231 resulted in permanent disability, and there were 461 deaths.

CANADA.—Department of Labor. *First annual report on cooperative associations in Canada, 1928. Ottawa, 1928. 78 pp.*

Contains data for 1,085 cooperative associations with a combined membership of 460,133. The associations are classified into the following groups: Fruit and vegetable growers, dairying associations, livestock associations, grain associations, and miscellaneous organizations. The Cooperative Union of Canada is noted, but its member societies and all the other consumers' cooperative societies are included in the "miscellaneous" classification.

FRANCE.—Ministère du Travail, de l'Hygiène, de l'Assistance, et de la Prèvoyance Sociales. *Annuaire statistique, 1927: France et colonies. Paris, 1928. 438 pp.*

This statistical yearbook for France and its colonies includes statistics on various subjects of interest to labor, including industrial and commercial education, life insurance and mutual aid societies, activities of associations and trade-unions, wages and hours of labor, and accidents.

GERMANY.—Statisches Reichsamt. *Statistisches Jahrbuch für das Deutsche Reich, 1928. Berlin, 1928. Various paging. Charts.*

Data regarding wages and earnings in various industries in Germany, taken from this statistical yearbook, are given on page 140 of this issue.

INTERNATIONAL LABOR OFFICE.—*Studies and reports, series L (professional workers), No. 2; Conditions of work and life of journalists. Geneva, 1928. 219 pp.*

Reviewed on page 45 of this issue.

NETHERLANDS (AMSTERDAM).—Bureau van Statistiek. *Statistisch Jaarboek der Gemeente Amsterdam, 1926–1927. Amsterdam, 1928. xliii, 371 pp. (In Dutch and French.)*

General statistics for the city of Amsterdam for 1926 and 1927, including data on work of employment offices and on industrial accidents.

SWEDEN.—Royal Social Board. *Social work and legislation in Sweden. Stockholm, 1928. 289 pp., illus.*

Includes information on the organization of social work, relations between employers and workers, employment and unemployment, legislation and private work for the protection of workers, social insurance, hygiene and care of the sick, housing, and consumers' and producers' cooperation.

—— Socialdepartementet. Riksförsäkringsanstalten. *Olycksfall i arbete, år 1925. Stockholm, 1928. 56 pp.*

An analysis of industrial accidents in Sweden in 1925, giving accident rates, distribution of accidents by sex, causes of accidents, etc.

Unofficial

ALLGEMEINER DEUTSCHER GEWERKSCHAFTSBUND. *Jahrbuch, 1927. Berlin, 1928. 342 pp.*

Yearbook of the German Federation of Labor for the year 1927.

AMERICAN FEDERATION OF LABOR. Executive Council. *Report to the forty-eighth annual convention, New Orleans, La., November 19, 1928. Washington, 1928. 100 pp.; charts.*

Reviewed on page 103 of this issue.

CALIFORNIA, UNIVERSITY OF. Heller Committee for Research in Social Economics. *Cost of living studies: Quantity and cost estimate of the standard of living of the professional class. Berkeley, 1928. (University of California publications in economics, vol. 5, No. 2, pp. 129–160.)*

CLAPP, MARY A., AND STRONG, MABEL A. *The school and the working child, being a study of the administration of certain laws pertaining to children in industry by 50 school departments of Massachusetts. Boston, Massachusetts Child Labor Committee, 1928. 226 pp.*

CLARK, VICTOR S. *History of manufactures in the United States, 1860–1914. Washington, Carnegie Institution of Washington, 1928. 949 pp.*

This book continues the history of American manufactures, the first volume of which, published in 1916, covers the period from the first American settlement (1607) to the Civil War (1860). The new publication begins with the opening of the Civil War and stops with that of the World War, within which time "occurred a greater quantitative expansion of industry than in all the previous history of the race." In covering so comprehensive a field Doctor Clark is, he believes, undertaking "virtually a pioneer work" as, with a few outstanding exceptions, American industries are unrecorded historically, and the material he presents has been chiefly "dug out of Government reports, court records, and above all, the trade and financial press." In an introductory note Prof. Henry W. Farnum calls the book "an interpretation in broad outlines of the development, the organization, and the economic interactions of manufacturing industry in our country during a truly remarkable period."

GENERAL EDUCATION BOARD. *Occasional papers, No. 8: Teachers' salaries in certain endowed and State supported colleges and universities in the United States, with special reference to colleges of arts, literature, and science, 1926–27, by Trevor Arnett. New York, 61 Broadway, 1928. 83 pp.*

Reviewed on page 134 of this issue.

GIBBONS, CHARLES E., AND STANBURY, CHESTER T. *Child labor in Mississippi. New York, National Child Labor Committee, 215 Fourth Avenue, 1928. 34 pp.*

A study of working children between the ages of 12 and 16 years of age, including recommendations for the improvement of the child labor situation in Mississippi. According to the report, "many children are working at an age when gainful employment should be prohibited. Others are working at jobs where they should not be employed; the daily and weekly hours are long; many are working at night; and the wages, as is usual when child labor is available, are low. What is needed is a comprehensive child labor law vigorously enforced." In the foreword to the report, the acting general secretary of the National Child Labor Committee states that "there is no evidence in this report, as there has been no evidence in any of the former reports of the committee, of any deliberate abuse of children. It is the same old story: An unconsidering public accepts with but little question low legal standards, and with even less question lack of enforcement. Poor laws are nullified by common consent and there is no fully informed public to decree and enforce by the law of custom what the State and local authorities fail to decree and enforce."

INTERNATIONAL HARVESTER CO. Agricultural Extension Department. *Farm hazards, by Ralph A. Hayne. Chicago, 606 South Michigan Avenue, 1928. 82 pp.*

This pamphlet consists of series of photographs of actual conditions found in many places, showing the innumerable hazards to life and limb which may exist in houses and outbuildings, from machinery and animals, and about farms generally, due to neglected repairs, unsafe practices, and carelessness. A number of pages are devoted to automobile hazards.

The photographs are accompanied by captions pointing out the dangers and also by suggested remedies. A section on first-aid in case of injury is included.

PERIODICAL ROOM GENERAL LIBRARY UNIV. OF MICH.
FEB 23 1929

KUCZYNSKI, ROBERT R. *The balance of births and deaths. Vol. 1.—Western and Northern Europe. New York, Macmillan Co., 1928. 140 pp., charts.*

In addition to the general discussion of the subject the author presents the material furnishing the basis of his study in the form of four appendixes, dealing respectively with births and birth rates; women of child-bearing age; age of mothers; and life tables and fertility tables. A digest of the writer's conclusions is given on page 121 of this issue.

NATIONAL EDUCATION ASSOCIATION. *Proceedings of the sixty-sixth annual meeting, held at Minneapolis, Minn., July 1–6, 1928. Washington, 1928. 1205 pp.*

Reviews of two addresses at this convention are given on pages 99 to 101.

NORTHERN STATES' COOPERATIVE LEAGUE. *Fourth yearbook, 1928. Minneapolis, 1928. 281 pp.*

The fourth, and last, yearbook of the Northern States' Cooperative League. (The yearbook will hereafter be a national publication.) Contains a wealth of statistical and other information concerning the societies in the States of Wisconsin, Michigan, Minnesota, and the Dakotas, as well as articles on cooperative subjects by well-known cooperators and economists. Data taken from the yearbook are given on page 96 of this issue.

SEIDEL, RICHARD, AND GÖRING, BERNHARD. *The trade-union movement of Germany, including a section on the nonmanual workers' trade-union movement. Amsterdam, International Federation of Trade Unions, 1928. 157 pp. (International trade-union library, Nos. 7/8.)*

A comprehensive history of the German trade-union movement from its beginning in the middle of the last century to the present day.

TAYLOR, ALBION GUILFORD. *Labor policies of the National Association of Manufacturers. Urbana, Ill., University of Illinois, 1928. 184 pp. (University of Illinois studies in the social sciences, Vol. XV, No. 1.)*

Traces the structural and functional development of the association, and describes its purposes and policies, propaganda methods, open-shop and political activities, and projects for industrial betterment.

UNION SUISSE DES PAYSANS. Secrétariat des Paysans Suisse. *Publication No. 89: Trentième rapport annuel du comité directeur, 1927. Brugg, 1928. 119 pp.*

Report of the secretariat of the Swiss Union of Peasants, which includes in its membership agricultural cooperative associations of various kinds.

VERBAND DER DEUTSCHEN STÄDTESTATISTIKER. *Statistisches Jahrbuch deutscher Städte. Leipzig, Friedrich Brandstetter, 1927. 632 pp.*

Statistical yearbook of German cities, with reports and tables on finances, land ownership, housing, education, insurance, public utilities, etc.

WATKINS, GORDON S. *Labor management. Chicago, A. W. Shaw Co., 1928. 726 pp.*